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Pithecanthropus in Peking

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NOT so many years ago, writers on the early palaeoanthropic phase of human evolution had to do the best they could with fragments of two individuals, the skull-cap, femur and a few odd teeth of *Pithecanthropus* (discovered by Dubois in Java in 1891) and the Heidelberg jaw discovered in 1908. Since 1927, and particularly during the years immediately preceding the present war, so many new finds have been made in the Far East that this phase of human evolution is becoming rapidly removed from the field of speculation. There are now available for study skulls (or portions of skulls) of at least seventeen individuals of the *Pithecanthropus* group of early man, five from Java and twelve from China, and these range in their age from early infancy up to full maturity. The Javanese specimens discovered since 1938 have not yet been described in full detail. On the other hand, a great deal of information on the Chinese fossils has been published from time to time in *Palaeontologia Sinica*, and the recent appearance of a comprehensive monograph on 'The Skull of *Sinanthropus pekinensis*' by Dr F. Weidenreich (1) seems an appropriate occasion for a brief discussion on their significance.

At the outset, the nomenclature of the fossils requires attention. When the late Professor Davidson Black studied the skeletal remains which were first discovered at Choukoutien, near Peking, he assigned them to a new genus, *Sinanthropus*, and this was no doubt justified at a time when knowledge of this ancient type of man was still rather meagre. With further discoveries in China and Java, however, it has become clear that it is no longer feasible to make such a generic distinction, and some anatomists have rightly urged that the term *Sinanthropus* should now be discarded, and the Chinese fossils be included with those from Java in the same genus *Pithecanthropus* (see *Man*, April 1937, No. 73). In a communication to *Nature* in 1939 (vol. 144, p. 926), v. Koenigswald and Weidenreich agreed that '*Pithecanthropus* and *Sinanthropus* . . . are related to each other in the same way as two different races of present mankind', and in his new

¹ The Skull of *Sinanthropus pekinensis*; a comparative study on a primitive hominid skull. By Franz Weidenreich. *Palaeontologia Sinica*, New Series, No. 10, 1943. Published by the Geological Survey of China. (For sale at the office of G. E. Stechert & Co., 31-33 East 10th Street, New York).

monograph Weidenreich reaffirms this point of view. Yet for some reason this author seems reluctant to follow his present interpretation to its logical conclusion; he insists on retaining the taxonomic label *Sinanthropus pekinensis* for the Choukoutien fossils, excusing himself by saying that he uses the term 'just as a name without any "generic" or "specific" meaning, or in other words, as a "latinization" of Peking Man'. To most readers this will hardly make sense, and indeed it may reasonably be asked whether anyone has the right to employ the Linnaean system of nomenclature in such an arbitrary way (2). In the present review we shall adopt what seems to be the logical standpoint, and apply the generic term *Pithecanthropus* to the Chinese as well as to the Javanese fossils. In this we now have the support of Prof. Ruggles Gates who, in a recent study of the phylogeny and classification of Hominids and Anthropoids agrees that, according to the rules of biological nomenclature, *Sinanthropus pekinensis* should now become *Pithecanthropus pekinensis*. (See *Amer. Journ. Phys. Anthropol.*, vol. 2, N.S. 1944, p. 279).

The detailed descriptions and measurements of the crania of the Chinese representatives of *Pithecanthropus* given by Weidenreich, supplemented by his shorter accounts of the recently discovered Javanese specimens, provide accurate data for summarizing their distinctive characteristics. This is made the more easy by the excellent illustrations executed by two Chinese artists, Chiang Han-cheng of Peiping Union Medical College, and Chen Chih-nung of the Caenozoic Research Laboratory; indeed, these drawings, together with the photographic illustrations, form in some ways the most valuable part of Weidenreich's monograph.

One of the remarkable features of the skulls of *Pithecanthropus* is the variability of their cranial capacity. In the Chinese fossils this is stated to range from 850 to 1300 cc. (with an average of 1075 cc.), and in the Javanese remains from 775 to 900 cc. (with an average of 860 cc.). The lowest figures, however, should perhaps be accepted with caution, since they are based on reconstructions of very incomplete skulls. In any case this range of variability overlaps that of modern man, so that no fundamental distinction from *Homo sapiens* can be made on the basis of brain size. On the other hand, the average cranial capacity of *Pithecanthropus* was undoubtedly very low as compared with that of modern man (1350 cc.) and this is correlated with a number of remarkably primitive features in the skull. These features include the following:—Heavy supraorbital ridges interconnected across the midline, receding forehead (though in the Chinese specimens there may be quite a marked frontal convexity), maximum breadth of cranial vault corresponds to the auricular width, total height of crania amounts to 115 mm. or less (in comparison with 134 mm. for modern man), length-height index of about 60 (compared with 75 for modern man), angular contour of the occipital bone as seen in lateral view, sagittal ridge, strongly developed occipital torus, anthropoid features of the temporal squama and tympanic plate, broad nasal bones, thickness of bones of cranial vault, pronounced sub-nasal prognathism, and a massive mandible with the absence of a

² In the course of his discussion on nomenclature, Weidenreich makes the statement (p. 262) that the present writer 'himself calls even *Homo sapiens* an "anthropoid ape"'. It is perhaps permissible to make a mild protest against this statement, for it is not true; indeed, it is a little difficult to understand how it could have been made. Parenthetically, it must be admitted that Dr Weidenreich seems unusually sensitive (even for a palaeo-anthropologist!) to criticisms of his own interpretations of human fossils, and his fine monograph tends therefore to be a little marred in its later pages by wrangling argumentation. But there is really no need (particularly for one of Weidenreich's distinction) to take umbrage at criticism, since, with the paucity of data in a subject like that of human palaeontology, alternative interpretations of such material as is available must no doubt be expected and allowed for.

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projecting chin. On the other hand the palate and dentition, together with the construction of the temporo-mandibular joint, are essentially human, even though some features of the teeth (such as the stout canines, the large lower premolars and certain details of cusp pattern) show resemblance to those of the anthropoid apes.

In remarkable contrast to the primitive character of the pithecanthropoid skull, the limb-bones (admittedly few and fragmentary as yet) are quite similar to those of *Homo sapiens* in their shape, size and proportions. They indicate a height of about five feet, and a gait and posture as advanced as those of modern man. The significance of these features can hardly be over-estimated, for they seem to indicate that at the very beginning of the Pleistocene period human limbs had already attained their final refinements of shape and proportions. This, again, suggests that the point of divergence of the evolutionary line leading to man from that leading to the modern large anthropoid apes must have been rather more remote than some anthropologists in the past have supposed.

We can now form a picture of *Pithecanthropus* as a man, rather short in stature by modern standards, with limbs fashioned as they are to-day, but with beetling brows, sloping forehead, powerful jaws equipped with rather large teeth, and strongly developed neck muscles. It may also be presumed, on account of the rather small size of the brain, that he had a relatively low standard of intelligence. Nevertheless, he was definitely human; indeed, it may be said that all the recent discoveries have served to emphasize the hominid rather than the anthropoid-ape characters of *Pithecanthropus*.

What is the significance of *Pithecanthropus* in relation to the evolution of *Homo sapiens*? It may be stated with confidence that there seems nothing to preclude the assumption that this extinct genus was directly ancestral to modern man. Indeed it presents a combination of morphological characters which might have been inferred for a hypothetical ancestral form simply from a study of comparative anatomy of man and the higher primates. Of the immediate precursors of *Pithecanthropus* nothing is known, and it must be admitted that the palaeontological record presents a serious gap here in the evolutionary series. It is true that there are remains of Pliocene apes from India, (*Bramapithecus* and *Ramapithecus*) whose teeth and palate showed remarkable human characters, and the recently discovered remains of the Australopithecinae in South Africa show parallel features. But, however important these may be as indications of the early stages in the evolution of a hominid from an anthropoid stock, they do not by any means serve to bridge the whole gap between ape and man.

On the other hand, the fossil record provides a fairly satisfactory graded series leading from *Pithecanthropus* to modern man. In their unusually wide range of variation the primitive morphological features of *Pithecanthropus* merge without any obvious hiatus into those of the early generalized Neanderthaloid types (3), as exemplified by the skulls discovered at Steinheim and Ehringsdorf, and the transition from the latter to modern types of man also presents no difficulty.

A great deal of discussion in the past has revolved round the problem of 'Neanderthal Man'—whether this type can be accepted as ancestral to *Homo sapiens*, or whether it represents a specialized and aberrant line of evolution which became extinct at the end of the Mousterian phase of the palaeolithic period. It seems certain that confusion has been introduced into some of these controversies by the failure to define what is meant by 'Neanderthal Man'. The name has reference, of course, to the discovery in the

³ Zuckerman has argued that it is not practicable to insist on a taxonomic distinction between *Pithecanthropus* and Neanderthal man, since in their morphological features they grade into each other too closely. (*Eugenics Rev.*, 1931, XXIV, 273).

Neander valley in Germany of a skull cap over eighty years ago. Subsequent discoveries showed that during Mousterian times (in the opening phases of the last of the Pleistocene glaciations) the European continent was occupied by a type of man characterized by a surprisingly large brain combined with many primitive features of the skull such as enormous supraorbital ridges, powerful jaws, large teeth, and receding chin. Because of their resemblance to the original type-specimen, these fossils were allocated by some anthropologists to a common species of mankind, *Homo neanderthalensis*, and by many this term was regarded as synonymous with 'Mousterian man'. Still later, skulls showing some (but by no means all) of the skeletal characters of Mousterian man were found from earlier deposits in Europe, and also in far distant regions of the earth such as Rhodesia and Java. Again, these have come to be regarded (because of certain cranial features such as the greatly developed supraorbital torus) as local variants of Neanderthal man, and are often referred to as 'Neanderthals' or 'Neanderthaloids'. This general application of the term 'Neanderthal' is perhaps justified, since it gives an indication of the main cranial characters of this collection of fossils in so far as they strike the eye superficially. But it is important to recognize that the collection includes a number of variants some of which may well bear an ancestral relationship to modern man, while others represent local specializations. There is certainly evidence that the later parts of the Mousterian epoch in Europe saw the appearance of a rather extreme Neanderthal type, and it has been argued with reason that the development of certain specialized features (such as an exaggerated form of the supraorbital torus, a pronounced tendency to 'taurodontism' in the teeth, and a number of limb-bone characters) must have debarred this type from giving rise to *Homo sapiens* in which these morphological extremes were avoided. The inference that this particular variant of Neanderthal man was an aberrant specialization is supported by the following facts; no skeletal remains of a *later* date than the Mousterian epoch have been found which mark a clear transition to *Homo sapiens*; there was rather an abrupt hiatus in the cultural sequence between the Mousterian phase of the palaeolithic period and the immediately succeeding phases; and finally the remains of 'Neanderthal man' dating from the interglacial period *preceding* the last glaciation were, in general, a good deal less 'Neanderthaloid'—approximating, that is to say, more closely to *Homo sapiens*. If reference is made to Zeuner's geochronological studies recently published (Occasional Paper No. 3 of the Institute of Archaeology, London University, 1940), it will be seen that the earlier representatives of Neanderthal man, which are estimated to date from the interglacial Riss-Würm interval, include the Krapina remains (in some of which the forehead region is relatively well developed, many of the teeth show no taurodont specialization, and the limb bones lack the apparently retrogressive characters of later types), at least some of the Mt. Carmel remains (which show close approximations to modern man), the Ehringsdorf skull (in which the forehead is vertical and well-arched) and probably the Steinheim skull and Galilee skulls (in which, also, the typical 'Neanderthaloid' features are but moderately developed). Lastly, the evidence of the Swanscombe skull is of great importance, because its antiquity is so well attested by stratigraphical, faunal and archaeological evidence. It can be referred to the middle Acheulian phase of palaeolithic culture and quite probably dates from the Mindel-Riss interglacial period. Only the parietal and occipital bones are available, though these are exceptionally well preserved. They show no distinctive Neanderthaloid features and in their dimensions and non-metrical characters are astonishingly similar to those of modern skulls.

All the evidence, which has been reviewed rather cursorily above, strongly suggests the following evolutionary sequence. A generalized Neanderthaloid type probably

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arose by the progressive development of the *Pithecanthropus* type of early man, and from this generalized Neanderthaloid type two separate lines of evolution diverged. One of these led to the specialized European Neanderthal type of later Mousterian date (which probably became extinct), and the other led through Acheulian man to *Homo sapiens*. This seems to be a reasonable interpretation of the facts which are now available, but it should be emphasized (particularly for the benefit of those anthropologists who may tend to feel affronted because this interpretation does not coincide completely with their own !) that the palaeontological evidence to hand is still far from complete and thus leaves the way open for alternative (but, in the present writer's view, on the whole less satisfactory) interpretations.

The relation of *Pithecanthropus* to the Piltdown fossil is a question frequently raised by students of human evolution, but it must be admitted that no convincing answer can at present be given. One of the writer's colleagues expressed some surprise that in his review of the palaeontological evidence bearing on human evolution (*Biol. Rev.*, 1940, xv, 202) he nowhere mentioned *Eoanthropus*. But this omission was deliberate. The fact is that these fossil remains still present a mystery, and opinions held about them by well qualified anatomists remain as violently opposed to each other as they were thirty years ago. It seems wise, therefore, to put them aside for the moment in discussions on palaeo-anthropology and to await the time when further discoveries will show them in their true light. On the other hand, they can hardly be dismissed so lightly, as Weidenreich seems disposed to do, by affirming categorically that the cranial fragments are those of *Homo sapiens*, and the jaw that of an ape. The cranial fragments do show certain peculiarities as compared with modern man, notably in their great thickness; and the teeth, in their alignment and the nature of their wear, also present features unusual for an anthropoid ape. The explanation of these odd assortments of morphological characters will no doubt be apparent some day.

In summing up very briefly the contribution to our knowledge of human evolution presented by the fossil remains of *Pithecanthropus* from China and Java, it is now clear that in the early part of the Pleistocene period true men were already in existence. Their limb structure was, even at this early time, of a fully developed modern type. On the other hand, their cranial capacity was small (with an average of about 300 cc. less than the average for modern man) and they retained many primitive characters in the structure of the skull and in their jaws and teeth. While *Pithecanthropus* is separated by a conspicuous gap in the fossil record from such generalized fossil apes as are at present known (and which might conceivably have provided the basis for the later evolution of the Hominidae), there is available a fairly closely graded series linking this extinct genus through generalized Neanderthaloid types with modern types of man. On the other hand, the specialized types of Neanderthal man which appeared in Europe during the later part of the Mousterian epoch probably played no part in the evolution of *Homo sapiens*.

As already stated, the occasion for this short review was the appearance of the most recent of several monographs on the Choukoutien fossils which have appeared from Weidenreich's pen. If Dr Weidenreich seems at times to be a little ungenerous in his attitude towards the opinions of his fellow anthropologists elsewhere, the latter will nevertheless be extremely grateful to him for the devotion with which he has applied himself to these detailed studies. They will also sympathize with him in the great difficulties with which he carried on his work in later years until he was compelled by the war in the Far East to leave Peking. We may express the sincere hope that it will not be long before he can return there once more to continue his important investigations.

Maiden Castle

by W. F. GRIMES

Maiden Castle, Dorset. By R. E. M. Wheeler. Report no. xii of the Research Committee of the Society of Antiquaries of London, pp. xx, 400, with 119 plates and 119 figures in text. Oxford: printed by the University Press for the Society, 1943. 25s.

MAIDEN CASTLE must be regarded as something of a landmark in Dr Wheeler's career and in the wider world of British archaeology generally. It marks the climax of the achievement of the most colourful personality in the field of excavation, and in a sense of a school within that field, in the period between the two wars. It is a sumptuous volume, lavishly illustrated, written with that clarity of expression and urbanity of style that have contributed so much to the Wheeler achievement not merely of having brought archaeology into the public eye, but of having kept it there. With so much from which to choose a review to be of reasonable length must be selective, and here I propose to confine myself almost entirely to *Maiden Castle* as the report of an excavation. That is not to mean that the rest goes unappreciated.

It will perhaps not be out of place to consider briefly here what nowadays is expected of the excavator. It would not, I think, be denied that he is the hub of the archaeological system, since whatever the value of other evidence, his is that, having been collected in conditions providing the greatest degree of control, will in the end yield the most exact information. It is on him, on the completeness of his observation, the controlled use of his insight and imagination, the exactness of his record, that all who follow must depend—and doubly so, because much of the evidence seen by him can never be seen by anyone else. For always to some extent he must destroy as he goes.

His function therefore I take to be the objective observation and exact recording, as far as possible, of the manifold features of his site and of the objects found thereon; the provision, in short, of a foundation of facts. He may (or may not, according to his inclination) add to it a superstructure of historic, social, economic or cultural reasoning or speculation. The point is that his duty as an excavator will have been done if he provides the material evidence in a form in which it can be fully used by others. It will not have been done if, however elaborate the superstructure, this foundation is not complete (as far as his site allows) or if it is insecurely established.

That is a statement of the excavating function in its simplest terms, shorn of all discussion of wider issues or of related questions of detail. The distinction between foundation and superstructure is to some extent artificial in practice; it goes without saying that some or other of the aims which form the superstructure are in the minds of all excavators. The good excavator cannot well be a narrow-minded technician and the wider his view of his responsibilities the better his work is likely to be. Provided we do not lose sight of the basic need for a foundation so established that new structures may be built upon it to replace obsolete, that is as it should be. A historical aim of some sort we have long expected of him; but in recent years social, economic and cultural matters have loomed ever larger in our thoughts as the historical outline has taken shape. The reconstruction of the life of primitive communities has become and will remain a priority of archaeological research.

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Dr Wheeler's aims at Maiden Castle naturally range the gamut of activities which I have outlined. His third—'to explore the possibility of recovering some part of the town-plan' (p. 4)—can be nothing other than the attempt to give graphic expression, in terms of post-holes, pits, floors, gullies and the like, to the communal life of the settlement; and if the plan was to have meaning, must involve some understanding of its structural elements and of the uses to which they were put.

In a defended settlement like Maiden Castle the most precise historical information will come from the defences, for it is in the defences that the reactions of the population to external happenings is most clearly expressed (1). Dr Wheeler's elucidation of the structural problems of Maiden Castle seems to me to be first-rate. The successive phases of construction of the ramparts themselves are securely established from the sections cut and are substantially consistent throughout the site; and the excavators have been fortunate in that the sequence was closely associated with occupation deposits (on Site D, for instance), the datable material from which could augment the too-often scanty finds from the defences themselves.

Above all, the excavation of the elaborate eastern entrance is a masterly piece of work, beautifully illustrated by a magnificent series of photographs and diagrams. (It is sad that the great block plan of this entrance (pl. cxix) has been marred by the omission of so much of the Belgic detail.) I could only wish that here we had been told something of the technical methods by which these results were achieved.

Without wishing to suggest that the problems of the defences were easy, those which attended Dr Wheeler's other objective, that of obtaining some part of the town-plan, were even more difficult. In acknowledging disappointing results here the excavator himself points out the effects of wear and tear in truncating the remains of earlier phases on many parts of the site. There is no way round this: the result can only be an incomplete picture of the structures themselves and of the settlement to which they belong. But difficult problems of a different type arise where there has been not wear, but an accumulation of deposits. The recognition of the structural details on which a plan depends is far from easy in re-deposited material and (with things like post-holes) may at times be impossible; their interpretation may be difficult; and when found and interpreted the exact correlation of the various elements with one another in successive phases may still not be realised. The primitive buildings of a primitive people and the less precise definition of their cultural equipment defy the close analysis that is often possible, for instance, in the Roman period.

My own complaint here is not that in spite of these difficulties some part of the town-plan has not been recovered. The areas examined for this purpose were in any case too small to tell us much. It is rather that, as a contribution to the ultimate achievement of such a plan, here or elsewhere, the report does not give us a clear understanding of the elements in that plan which even at Maiden Castle were untrammelled.

First of all the extraordinary fact must be noted that there is a complete absence of any detailed study of the stratification of the occupation areas. On Site D (pl. viii) 'many successive hut floors' were recognized; and the partial section shows an occupation-deposit more than 4 feet thick. But we have no very clear picture, either here or elsewhere, of the way in which this and similar deposits were accumulated, although the finds catalogue indicates that a recognizable stratification often existed. This information

¹ But the evidence from the occupation-areas has at least a certain statistical bearing also—just as, in the opposite direction the character of the defences themselves at Maiden Castle sheds light upon cultural matters like tribal origins and what is often called the art of war.

is fundamental to an understanding of the nature of the floor-structures at Maiden Castle itself. It would have been of the greatest value for future work on other sites.

I cannot pretend, either, that I have been told enough about the huts on Site D. Is it satisfactory that huts complete enough to be recognized should be omitted from the plan? Surely, if we are ever to develop our town plan we cannot wait for ideal conditions in which all our huts will be preserved in all their details. Hut-remains which are recognizable must be represented; and troublesome as it may be, a technique must be found by which this can be done.

Thirdly, the pits which are a feature of all the areas explored. Dr Wheeler compromises between the old view that these pits were dwellings, and the new and generally accepted one that they were storage-pits discarded and usually refilled with rubbish. The great majority, he agrees, were storage-pits-become-rubbish-pits; but a few, notably the shallower ones, were used as cooking-pits, others as 'living-quarters or at least as dining-rooms'.

Now I must admit that my own experience is against this 'composite' theory. But ready as I am to believe that the practice varied between different groups, Dr Wheeler does not provide me with the evidence on which I may convince myself. His descriptions of the varied pit-fillings are everywhere in only the most general terms; there is no description of a single complete pit; and many of the features in the drawn sections which illustrate his account of them are unexplained. What is the purpose of numbering the layers in these fillings if no description to tally is provided; if also the finds are not related? (2) How can we hope to understand the functions of the pits, the length of time any particular pit remained in use (Dr Wheeler's remarks seem to imply that some were open over a long period) or the cultural changes that have gone on during their life-time, if the evidence is thus loosely handled?

And not even the generalizations are adequate. There is no list of dated pits; (3) nor are we always told which pits served the varying purposes that Dr Wheeler allows them. The plans do not help us. They mislead by being too generalized, for they make no attempt to differentiate pits (or, for that matter, huts) which, by belonging to different phases, are essentially unrelated.

I submit that matters like these do not belong to the welter of unimportant details that may be justifiably omitted—although they may be simplified or treated selectively—from an excavation report. They are fundamental to the purpose of this part of the operations at Maiden Castle, fundamental to an appraisal of Dr Wheeler's views on the various aspects of the social life of the community, necessary if, in future work on these problems, much of what was done at Maiden Castle is not to be wasted.

These omissions handicap also our study of the material culture of the site, depending as that does upon the correlation of artifacts in stratigraphically related and sealed deposits and in closed associations. Dr Wheeler provides us with many correlations, but here his arrangement of the catalogues operates against us because by classifying the finds according to type of artifact (pottery) or the nature of the raw material (objects of bone) it

² Pit B14 (fig. 11) shows nine layers of Bii date. Five pots are recorded from it in the catalogue: 109, 112, 116—there said to be typically Biii—125, 148. None is related in exact terms to its find-spot.

³ In the site descriptions 'A' pits are often specified. Only the totals of the others are stated and sometimes not exactly. On site B there are 12 'A' pits, 26 'B' pits (not specified) and 1 'C' out of 50 numbered on the plan; but on site 'A' the remainder were 'wholly or mostly' of Iron Age 'B'. There is some discrepancy between text and plan (p. 127 and fig. 25), on Site R.

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cuts completely across the cultural divisions which are the key to the history of the site. Within these classes the divisions are partly cultural, partly typological ; and the attempt to see any one culture or cultural phase as a whole involves a tedious and uncertain search through the whole catalogue. Surely what is wanted is not an antiquated artificial classification, but one which recognizes that movements which were distinct in history ought not to be jumbled together, but should maintain in the account of their characters the independence and homogeneity which they enjoyed in fact. If Iron Age A, B and C had been given their separate headings the catalogue would have gained in clarity, and provision could still have been made for matters of general importance or for questions of transition.

I make these criticisms with a good deal of misgiving. Work ended at Maiden Castle in 1937, the report appeared in 1943 and four of those six years were lost in a war in which Dr Wheeler has taken an active and distinguished part. I have no wish to sour his achievement in producing this volume with crabbed and pettifogging criticism. Only Dr Wheeler can know how *Maiden Castle* differs from the report which would have appeared in normal times. I can only take this one as it is ; and if the price of production now was the omission of so much and the scant consideration of important questions of presentation, I can only suggest that we should all have benefited by delay until more normal times.

On the other hand, there are hints that the foundations of some part of this work were laid in their present form in 1934-8. I cannot escape the conclusion that Dr Wheeler's genius was more at home amongst the massive problems of those defences and in the broad historical outlines than amongst the huts and pits of their builders. For even his general conclusions about them are open to serious question (4).

In concentrating on the broad historical outlines, Dr Wheeler is clearly within his rights. But there and in all else touching his excavation he had a basic duty to perform, regardless of his own pre-occupations. It was, as I have tried to indicate, to provide the foundation of evidence which would allow others to see Maiden Castle for themselves without the interpolation of the excavator's judgments ; and thereby to add a body of knowledge and experience to the common pool for use in the future. The value of *Maiden Castle* for its facts will always be great and it is enhanced by the accompaniment of Dr Wheeler's views on many problems. But there is much which it should have contained and does not ; and herein must lie my excuse for the details with which at times I have loaded this review. They are the outcome, not of a wish to indulge in 'proof-reading', but of an attempt to supply from the facts given me just such comparative material for just such future use.

Something might be added as a postscript on the bearing of *Maiden Castle* on the future.

First, its influence on excavation reports yet to be written. That the continuity and polish of its writing will be admired and sought after goes without saying, just as Dr Wheeler's drawings have produced their imitators. But it is to be hoped that in seeking the same result excavators will not be tempted to take a course of action which in the early 1940's may have been forced on Dr Wheeler by circumstance, but which for them in normal times would be unjustifiable. The danger as I see it is that we might find ourselves faced with 'literary' excavation reports which would lose sight of the fact

⁴ I suggest that on the evidence available much that is contained in the last paragraph of page 68 will not stand careful examination.

that they were concerned primarily with a scientific operation, and would seek to achieve their effect by the elimination of inconvenient detail rather than by disciplined expression and careful arrangement.

Secondly, the bearing of its results upon future excavation-policy. I have already referred to the growth in the importance of the sociological approach which has the reconstruction of the life of primitive communities as its objective. The failure of Maiden Castle to make an effective contribution to this subject must give us food for thought.

The difficulties provided by the site seem to me to tell only part of the story here: I suggest that our own knowledge of the structures themselves is incomplete, our techniques of excavation capable probably of further development. The answer is the obvious one which Dr Wheeler himself in part supplies (p. 4). It is that we should for some time to come direct our attention not merely to simpler hill-forts with a comparatively short 'one-period' occupation, but to smaller types of sites, in which excavation should be, not sample-taking, but total. Thus we should have (in theory, at least) complete pictures of the structural remains of settlements which could be subjected to interpretation without the complications of other periods or of excessive multiplication. Increased knowledge of social and economic conditions would then be accompanied by added understanding of the structures themselves and by more sensitive techniques; and we should then be equipped in every sense for the examination of more complex sites like Maiden Castle on a scale which might be expected to yield results.

But—and this is my third point—development of such a policy depends upon money. In an interesting section on finance, Dr Wheeler tells us that the four seasons' work at Maiden Castle cost over £5000. These figures again must make us think when we consider what the cost at this rate would be of the total excavation of even a much smaller site. It is a generally accepted belief that the post-war period will see a redistribution of wealth which, it seems, is likely to affect most profoundly those layers of society from which support for archaeological enterprise most readily comes. Being neither economist nor prophet I cannot try to estimate the degree of likelihood in this theory; but it is not necessary to be either to recognize that excavation on a scale commensurate with the site and with the requirements at this stage of archaeological research must be a very expensive affair, and that costs are likely to go up rather than down in post-war years.

The question which archaeologists as a body must obviously consider is what sources of revenue are to replace or augment those which the pessimists say will be much reduced in future and which before the war were already barely adequate for the work waiting to be done. Can excavations be made self-supporting? Dr Wheeler explains how at Maiden Castle the visiting public were encouraged to contribute to archaeological research to the tune of £300 in a season; and this aspect can undoubtedly be developed. It is indeed desirable that it should be for other than financial reasons. Most of us have now come to recognize that in stimulating interest and disseminating knowledge we are performing a social duty to the community to which there will be response in the form of increased support for our activities and greater sympathy for our aims.

But like much that with less reason passes for democracy, the process is slow and its truly effective results belong to the long, if not to the distant, view. In the meantime—and I am content to put the question without searching for the answer—how is the transition to be faced?

Grey Ditch, Bradwell, Derbyshire

by B. H. ST. J. O'NEIL

ANAVIO, the Roman auxiliary fort at Brough near Hope in Derbyshire, lies on an eastward projecting spur of Eccles Hill, otherwise The Folly, a low hill south of Hope. The fort is situated in a typically Roman and commanding position immediately overlooking Peakshole Water at its confluence with Bradwell Brook. This latter watercourse flows, largely underground, down Bradwell Dale, which is the easiest approach from the northeast into Peak Forest.

The fort is of normal shape, a parallelogram, measuring 340 feet by 285 feet with long axis northeast to southwest (1). The rampart and ditch are well marked, although the latter is now largely silted up or ploughed in, save on the northeastern side, where the proximity of a steep slope to Peakshole Water has led to certain irregularities of outline.

There were the usual four gates, one in each side of the camp, but those in the longer northwestern and southeastern sides, normally the most important, are joined by a causeway across the fort, which presumably indicates the line of the principal road.

No road is visible from the northwestern gate down the slope to a rivulet, but from the other side of this stream a camber is well marked for a few yards. Thence down the slope towards Peakshole Water in a north-northwesterly direction there is what may be an embanked diagonal grassy road, going towards an existing ford over that Water.

Beyond the ford there are no certain traces of the road for three-quarters of a mile, although in certain lights a camber may perhaps be seen in the fields beside the road to Hope Station from the main road. Then in the field south of the new Hope cemetery a camber can be seen. For half-a-mile thence the line of the Roman road runs close to the railway, and there are no certain traces of it, but at the extreme southern end of the footpath and cart-track south from Fulwood Stile its camber again becomes visible, diverging from that footpath in the direction of the railway embankment. From this point northwards its line is indicated, as marked on the o.s. map, by a line of hedges and old road, climbing diagonally up the flank of Win Hill until it reaches the summit of the ridge at over 1000 feet above O.D. This roadway, as now seen, has few, if any, specifically Roman characteristics in detail, but its general character and line, especially when seen from Lose Hill to the west, proclaim it as a good example of Roman engineering practice. The line of descent into the Woodlands valley is obvious, although equally lacking in definite Roman characteristics.

It is clear from evidence, soon to be cited, that a Roman road approached Anavio from the direction of Doncaster via Templeborough to the northeast, as marked conjecturally on the o.s. map of Roman Britain (2nd edition), but, as no traces of it could be found by the present writer between Bamford and Anavio, he thinks it better to describe it as investigated, i.e. from Stanage Edge westward towards the fort.

The o.s. map (1-in. no. 37, popular edition) gives the name 'Long Causeway', in letters normally used for Roman antiquities, to a road leading from the western suburb

¹ *V.C.H. Derbyshire*, I, 201 ff.

ANTIQUITY

of Sheffield, Hallam Head, to Redmires Reservoirs, and again thence southwestwards to Stanage Pole. The writer investigated this line of road from Stanage Pole westwards with the following results.

From Stanage Pole across marshy ground westwards there is a metalled road upon a wide causeway. The surface is partly paved with small blocks of stone on the wheel tracks, but it is clear that the existing surface is of comparatively recent date. It may be connected with the cartage of heavy millstones of gritstone, some dozens of which still lie deserted at the southern end of Stanage Edge; one lies beside the road under discussion, about a mile to the west. The underlying causeway may well be Roman. When they approach Stanage Edge, both causeway and present road curve round to run northwestward along the top of the Edge. After about a quarter of a mile the existing road begins to descend the hillside, and through the actual cliff it is carried upon a high dry-built wall, which has not the appearance of being Roman work.

Soon after the beginning of the descent, however, traces were noticed, just to the east, of an old road, cut into the hillside. Much of it has been obliterated or cut by water-action, and in one place it has obviously been destroyed by a small quarry, whence, it seems, were derived the stones for the dry-built revetment of the present road. Nevertheless it can be traced as a practically level track along the hillside for a quarter of a mile to the re-entrant of a small stream. It crosses this stream by means of a built-up and reveted bank. Then up the opposite hillside, going northwestward, there is a most pronounced cambered way. In spite of its thick covering of heather occasional paving slabs are visible, sometimes channelled through hard wear from wheeled vehicles. After a short climb this cambered way comes to the actual edge of the cliff (Stanage Edge), and here there is preserved a very fine paved road, mostly free of heather. The paving stones of grit sometimes measure 2 yards long and a yard in width. The overall width of the road is uniformly 8 to 9 feet, and the two channels made by wheeled vehicles are well marked throughout. There are indications that the paving was laid directly upon the moorland surface, which here has a thin layer of peat on the subsoil.

The stone paving is still visible during the beginning of the descent of this road through a cleft in the cliff. Soon, however, it disappears under bracken, but the line of the road is clear as a hollow-way, with slight changes of alignment towards the west, down the hillside as far as the cart-track which runs for some miles at the foot of Stanage Edge. From that point, at least in summer when the bracken is high, there are no certain indications of the road for about 400 yards. There are at least two alternatives, a berm or hollow-way continuing in the same direction as the one last mentioned, and a zig-zag hollow-way a little further south. It may well be that the true line has been obscured by later tracks, made by workers of millstones.

It does, however, seem to be significant that the present road, the same, which was followed from Stanage Pole westwards for half a mile, becomes straighter and wider at a bend, where it swings into the alignment of the hollow-way, which comes down the cliff-edge from the paved road. For a mile thereafter the present road, which is aligned in three straight stretches, has beside it on the north or west a narrow cambered way, now grass-grown. Then, when it ascends Bole Hill, its northern defining wall appears to run on a slight mound or cambered way. Its descent along the western flank of Bole Hill is on the only possible line, since the hillside is very steep. But at the crossing of a stream, which flows out of Bamford Moor, whereas the present road makes the usual rather wide sweep upstream, there are traces of an earlier road crossing the stream on a built-up and reveted bank, similar to that noticed on the top of Stanage Edge, and exactly on the alignment of the descent down the flank of Bole Hill. This earlier road

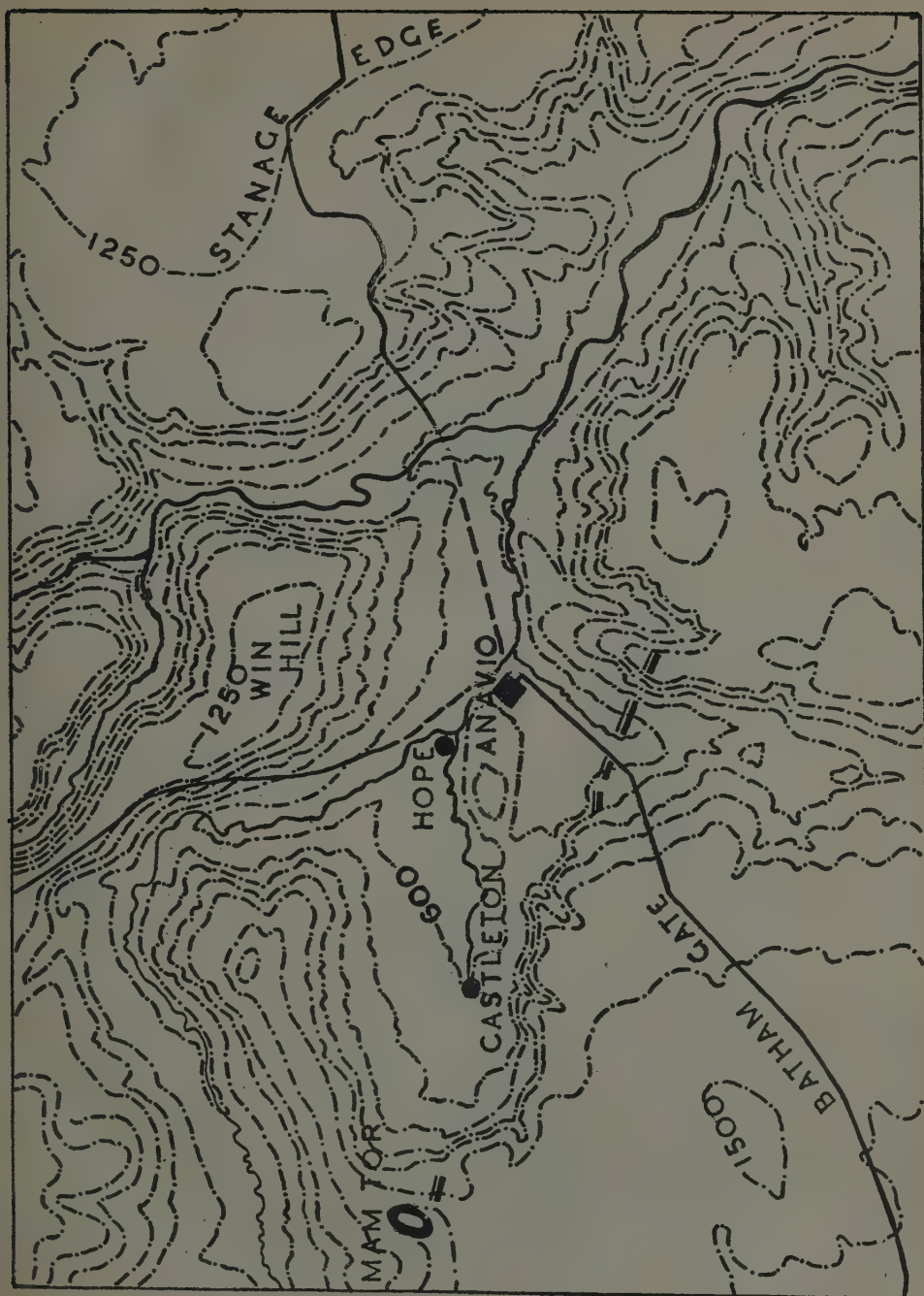


FIG. 1. BRADWELL AND DISTRICT, DERBYSHIRE, SHOWING THE ROMAN SITE ANAVIO, ROMAN ROADS TO IT, AND GREY DITCH
(Scale: 1 in. to 1 mile)

can be faintly traced in the bracken, lower down than the present road, ascending the next hillside, the two lines coalescing at the summit of the road above Bamford.

The descent to Bamford of the present road is absolutely straight and very steep. It is quite unlike any normal English mountain road, but precisely resembles the descent of Batham Gate to Bradwell (see below).

As it has not proved possible to find traces of a road directly linking Bamford and Brough, a Roman origin for the road here described cannot be definitely claimed, but it is suggested that the evidence available is all in favour of such an ascription.

The road issuing from the southeastern gate of Anavio takes the form of a narrow camber, which proceeds southeastwards for about 50 yards and then turns abruptly to run southwestwards downhill for 100 yards to the edge of the field. In the next field nothing comparable seems to exist, but it is clear that this line, if produced, would debouch upon the modern road a short distance southwest of Brough House. This modern road as far as the New Bath Inn, which is built on a boss of rock, known locally as Idden Tree, and for a short distance beyond is built upon a causeway, which is as likely to be Roman as of more recent date. This line at any rate seems certainly to be that of the Roman road as marked upon the o.s. maps with the name Batham Gate.

Beyond the causeway south of the Bath Inn the exact line is not preserved, but the road clearly ran to the foot of the steep straight ascent of the hillside now bordered by the houses of Bradwell. This steep ascent wears the appearance of remote antiquity, and as such can be none other than Roman. At the top of this steep ascent the land continues to rise, but not so steeply. There has been much cultivation and for some distance all traces of the road have vanished. Its line is, however, certain, because after an interval of three-quarters of a mile a typically Roman camber exists beside the cart-track, leading through some old lead workings. These workings have naturally destroyed much of it, but enough remains for its course to be determined. For another mile its camber can be seen on one side or the other of the same cart-track, finally running beneath the northern boundary wall of the latter as it reaches the summit of the moor. Thence it runs, as on the o.s. maps, as a very well marked camber, 25 feet to 30 feet wide overall, to the hillside half a mile southeast of Peak Forest Church. It is there seen as a grassy embankment, descending the hill diagonally across the modern road, and finally converging with it running towards Peak Forest.

On the o.s. map (popular edition sheet 45) an earthwork named Grey Ditch is marked as running straight up the side of Bradwell Hills, about half a mile NE. of Bradwell, from Bradwell Brook, WNW. to ESE., for about a quarter of a mile. This earthwork still exists as shown on the map. Its western end rests upon the flood plain of the brook; where best preserved, the bank stands 8 feet in vertical height above the bottom of the ditch, which is everywhere to the north of the bank. It ascends the steep open moorland and ends most impressively, with bank 12 feet high, on the side of a natural gully. On the summit of the ridge to the east, almost on the same alignment and visible from afar as a nick in the skyline, there is a similar bank and ditch. On the crest of the ridge the bank stands 13 feet in height above the ditch. It ends close to the eastern slope of the hillside to Over Dale, where the latter is especially steep and rocky. Between the actual end of the earthwork and this steep natural slope there are two hollow-ways, which must be the predecessors of the present ridge cart-track running from north to south. They have clearly been much used and in early times must have been the principal means of access to Abney Moor and beyond from the Hope Valley. Appearances suggest that, although this ridge track may once have continued north-eastwards on the crest of the ridge to a crossing of the river Noe opposite Thornhill, it has at some time been diverted

to go due north and then by a zig-zag to Brough. In any case it seems clear from the convergence of several hollow-ways at the point where Grey Ditch approaches the steep side of Over Dale, that at that place there was a definite point to be aimed at, to wit a way through or past the earthwork itself.

A glance from the summit of this ridge along the line of Grey Ditch, as already described, suggested that a certain hedge-line might represent the continuance of the earthwork on the western side of Bradwell Brook. Later investigation proved this suggestion to be correct. The ditch is so marked on the 6-in. o.s. map (Derbyshire x, sw.) and is also recorded in V.C.H. (2). There is no trace of it between the brook and Batham Gate, where the land has been intensely cultivated, but immediately to the west of Batham Gate it is still visible. On level ground the bank has become a flat cart-track and the ditch has been almost ploughed flat, but a row of thorn trees stands on the correct line at the top of a slope, which is higher than that of a normal hedge bank. Where the ground begins to rise both bank and ditch become quite obvious, the maximum height of the former being about 7 feet. The earthwork runs a little way up and stops on the slope of Mich Low, a rocky knoll, which is similar but much larger than that on which stands the New Bath Inn to the northeast.

West of this same knoll there is a grassy glade, up which, owing to its comparatively easy gradient, access could have been obtained to Bradwell from the Hope Valley. At the head of this glade there is an earthwork similar in every way to the other parts of Grey Ditch, as already described, save that its ditch is now only a flat berm, on which is a narrow path between stone walls, and that the bank does not rise above the land to the south. Its very regularity argues against it being a natural feature, and it seems clear that it is an artificial barrier from the rocky knoll to the steep hill-side a few hundred yards westward, to deny access up the glade (3).

The edge of the carboniferous limestone plateau of Peak Forest is very steep from this point westward past Castleton for between 3 and 4 miles. Indeed only in one place could access have been easy under primitive conditions. This place is immediately southeast of Mam Tor. The natural configuration of the land has been much obscured by quarries and the cutting of the modern road, but it seems that there once existed here a glade, such as appears to have been barred by a linear earthwork north of Bradwell. The o.s. maps, especially the older ones, appear to mark but not to name a short earthwork at this point, and there still remains a short piece of what could be identified as artificial bank and ditch. Certainty on this point is impossible without excavation, but its position, precisely where required for a barrier to access, coupled with the marking on the o.s. maps, does suggest that the bank is indeed another work of the character of Grey Ditch.

In a region where ridge-tracks are not noticeably so common as, for instance, in Wales, it is legitimate to point to a well-marked example along the ridge between Edale and the Hope Valley. Beginning near Bleak House, Hope, it climbs along the southern side (not the summit) of Lose Hill (2 miles west of Win Hill) and continues so as far as Hollins Cross. Thence to Mam Tor it runs perforce upon the actual ridge. Traffic along it could, of course, have been easily barred or controlled by means of the ramparts of Mam Tor, whether or not that prehistoric camp was in actual fact still in use or was being reused as a fortification. Moreover there are possible traces of a bank and ditch

² Derbyshire, I, 359-60.

³ It does not seem that this portion of the earthwork has hitherto been recorded.

GREY DITCH, BRADWELL, DERBYSHIRE

down the southern slope of Lose Hill as far as and just across the line of this track ; these may however be natural, their regularity being perhaps fortuitous.

The linear earthworks which have been described, viz. the various portions of Grey Ditch and the possible bank below Mam Tor, seem to have had a common purpose. Together with natural crags and steep hillsides they bar access southward into Peak Forest from the north, or more specifically northeast, along a line 5 miles long. As usual with such earthworks, they cannot be looked upon as strictly defensive, but rather as frontiers or as barriers to control traffic and prevent forays for cattle, etc. (4).

It is recorded in the *Victoria County History* that ' Mr Bray was the first to notice the Grey Ditch, in 1783. From this Camp (Mam Tor) a ditch is carried down the south side of the hill, across the valley of the Milcklow Hill, about three miles off ; and from thence SE. by S. crossing the Bradwell, and running by Brough, it goes in a straight line to Shalton, or Bradwell Edge, about three miles more. It is called the Grey Ditch and was possibly a *Pretentura* or fore-fence of the Romans. On the side of Mam Tor Hill it is very visible ; in the valley it is lost in many places, the plough having destroyed it ; but from Micklow Hill to Shalton-edge, it is plainly seen. The slope or front is towards Brough ; it is about 20 feet high and 12 feet broad at top. There is no tradition concerning it, but pieces of swords, spears, spurs and bridle bits have been found on both sides, and very near it, between Batham Gate and Bradwell-water '(5).

This most interesting reference was not known to the writer until after his field-work on Grey Ditch had been completed. Its very insistence upon the presence of a bank down the side of Mam Tor supplements the meagre traces of such an earthwork, now visible and described above. There seems no reason to accept Bray's statement that intervening pieces of the bank had been levelled by the plough before his day, since it is now possible to explain its occurrence only in certain places by the reliance placed upon natural obstacles as part of the barrier system. At the same time his effort to connect the bank down Mam Tor with Grey Ditch proper at Bradwell is of the highest significance. He says that no tradition attached to the bank locally. On the other hand it is unlikely that he invented the idea that it was once continuous from Mam Tor to Bradwell. It seems, therefore, highly probable that his statement to that effect is taken from local tradition. In other words it was known that a line of demarcation once existed in the area, although its real significance had been forgotten, as had its true line, which made frequent use of natural features. If this supposition is correct, folk memory through 1000 years or more has once more contributed handsomely to the support of archaeological observation.

Many years ago General Pitt Rivers, when summing up the evidence of excavations on Wansdyke (6), where Roman pottery had been found under and in the bank, rightly concluded that the earthwork could be attributed either to the late Roman period, or to the Britons after the official severance with Rome in A.D. 410, or to the invading Anglo-Saxons. Evidence such as was provided by Wansdyke is not yet available for Grey Ditch,

⁴ An illustration of the use made of such an earthwork during the struggle between Celt and Saxon occurs in the poems of Llywarch Hen. There Gwên, the last of Llywarch's twenty-four sons ' by the Llawen kept watch that night. In the fight he fled not. Sad is the tale, on Gorlas Dyke. At the ford of Morlas, Gwên fell'. (Ifor Williams, Rhys Memorial Lecture, 1932 (*Proc. Brit. Acad.*, XVIII), 19.

⁵ Bray's *Tour through Yorks. and Derby*, 204, in *V.C.H. Derbyshire*, I, 360. These weapons appear to have been found where no bank now occurs (v. p. 16) and where perhaps a wide gap was deliberately left. It could naturally be the scene of warlike encounters.

⁶ Pitt-Rivers, *Excavations in Bokerly Dyke and Wansdyke*, 28-30.

Bradwell, but a pre-Roman origin is at least most unlikely, for in Derbyshire it could not as yet be contended that a linear earthwork was the work of the Belgae, the only prehistoric people in England yet credited with such a design. Moreover the general character of linear earthworks of this kind is quite out of keeping with all that is known of the Roman period in Britain. There still remains, however, the dilemma whether in any particular instance the work should be ascribed to the Britons or to the Saxons. General Pitt Rivers rightly held (7), that, although the Britons must have adopted the idea of such frontier works in imitation of the Roman Walls, the Anglo-Saxons were likely in their turn to have copied the Britons. The truth of this opinion has been upheld historically in the case of Offa's Dyke, and archaeologically in the case of Bran Ditch, Cambridgeshire (8). In general it seems that the decision in cases of this kind must be left to the historian, since the archaeological evidence is likely to be meagre or indeterminate, but it is nevertheless incumbent upon the archaeologist to assemble and to assess all the evidence which he can collect.

The only archaeological evidence in the case of Grey Ditch is that it appears to take account of certain tracks and roads, including a Roman road, and that it lies immediately in front of an area rich in lead, which was worked in Roman times. Yet that road, Batham Gate, is, with certain minor diversions, still in use at the present time, and may be presumed to have been in continuous use since the day it was built. Consequently it is of no service in differentiating between Britons and Angles as the builders of Grey Ditch. Moreover, although it is not known whether the Angles did or did not work the lead from the early days of infiltration and conquest, it is perhaps significant that, although almost from the first issue their coinage was of silver, which presupposes the working of lead in some parts of the country (9), that issue is not earlier than c. A.D. 600-650 (10).

It is, therefore, necessary to investigate the character of early Anglian discoveries in the district. The evidence has been set out in the *Victoria County History* by Mr John Ward (11). It is at once evident that there is a sharp distinction between the Anglian interments of South Derbyshire, i.e. the Trent Valley, and North Derbyshire, i.e. the limestone uplands including Peak Forest. In the former there are a number of cremation cemeteries of normal type; in the latter west of the river Derwent only barrow burials, primary or secondary, have been found. This distinction suggests that, although there was early penetration by the Angles along the Trent Valley, some generations elapsed before they or their successors moved in any strength northwards into the hills of the Peak District. Thus Mr J. N. L. Myres, in commenting upon the distinction in burial customs, has suggested that 'an unusually prolonged period of raiding preceded and delayed the final occupation' (12).

It may, therefore, be guessed that the Britons of the Derbyshire limestone hills remained for some considerable period free from Anglian domination. The apparent absence of any linear earthwork of the type of Grey Ditch, Bradwell, across the foothills facing southwards to the Trent does indeed suggest that even raiding was for long a

⁷ *Ibid.*

⁸ ANTIQUITY, 1929, p. 150.

⁹ The complete absence of sceattas in Derbyshire argues against early working of the lead mines of the county, v. *Num. Chron.*, 1942, opp. p. 69

¹⁰ *Ibid.* p. 50.

¹¹ *V.C.H.*, I, 265 ff.

¹² *Roman Britain and the English Settlements*, 417.

GREY DITCH, BRADWELL, DERBYSHIRE

rare occurrence. A glance at the map of Roman remains in Derbyshire suggests (13), indeed, that apart from the lead, there was little in the area to attract attention, and, as already remarked, there is no evidence that lead was sought by Angles or Saxons in the early stages of conquest. Finally the presence in the area of three hanging-bowls, one of very late type in the series, whatever their full significance, may perhaps be held to support the suggestion that the survival of Celtic Art was long-continued in this remote area of unattractive land (14).

Of this suggested Romano-British enclave in the 5th or even 6th century A.D. Grey Ditch may well have been the frontier. But a frontier presupposes an adversary against whom it is drawn, and in that connexion it must be confessed that there seems to be no evidence whatever of Anglian penetration from a northeasterly direction towards Derbyshire. The valley of the Don has no Anglian cemeteries or burials (15). Yet Grey Ditch is not the only linear earthwork which seems to be related to penetration of the kind in question. The Roman Ridges, near Rotherham, may well owe their existence to an attempt to prohibit raiding away from the Roman road from Doncaster to Templeborough. This is the very road which, as the Long Causeway, leads on to Brough, and it is against penetration along this route that Grey Ditch seems specifically to have been erected (16).

Thus, in spite of the paucity of the evidence, it may well be that Anglian invaders were in fact the foes of the Britons, who sought to define their territory by means of Grey Ditch, just as their comrades in the kingdom of Elmet to the north appear to have done by means of the Roman Rigs and Becca Banks in Yorkshire. On the other hand internecine strife between rival British kingdoms or between later Anglian settlers may have been the occasion for the work. Between these possibilities the historians may decide.

¹³ *V.C.H.*, I, 191 ff.

¹⁴ *ANTIQUITY*, 1932, 190.

¹⁵ *Ordnance Map of Britain in the Dark Ages*, South Sheet, O.S. 1935.

¹⁶ The presence of Roman pigs of Derbyshire lead on the Humber at Brough and South Cave has been held to suggest that the metal was carried there for export (*Arch. Journ.*, XLVII, 257-8). The Angles may well have taken the same route in the reverse direction, by water up the Don, and thence by the road under discussion.

Lanhydrock Atlas

by N. J. G. POUNDS

THE Lanhydrock Atlas was compiled in 1696, about the time that Celia Fiennes made her memorable tour to Cornwall, and provides a body of material complementary to the topographical descriptions in her itinerary. Local maps dating from before 1700 are comparatively rare, and this collection of over 250 is of quite exceptional economic and topographic interest. The maps are bound in leather into four volumes, each measuring 16 inches by 20, which are normally kept in the library of Viscount Clifden, at Lanhydrock House. All are on parchment, and each sheet has a narrow, ornamental border, a decorative panel containing the name of the manor or farmstead surveyed, and a compass rose more or less elaborate. The scale is not uniform throughout the Atlas, but most manors are surveyed on a scale of about 1 : 4000. All the maps are anonymous, but it has been suggested (1) that they are the work of George Withiel of Penryn, who was the only Cornish map-maker of any ability before the time of Martin, (2) who made the first reliable map of the county. The area surveyed is about 40,000 acres, or 62 square miles.

A label affixed to the cover of each volume lists the more important manors dealt with in it. The volumes have been arbitrarily numbered :—

- I. Trezela, Mulfra, Penzance, St. Just, Bosvening, Truro, Ellinglaze, Pengersick, Drinnick, Helstone Tony ; 62 maps.
- II. Padstow, Penkivel, Tregenna, Little Colan, Bosvellake, Trelowith, Boskenwyn, Predannack Wartha, Predannack Wollas ; 60 maps.
- III. Bodardle, Luxullion, Bodwithge, Burngullo, Tregustick, Tregoide, New Hall. The numbering of the maps is incorrect ; there are actually 72.
- IV. Larnwarnick, Trevilles, Carburrow, Polskoath, Lanhydrock Treffry, Cabbilla, Tremore, Rosewarrick, Neither Helland ; 64 maps.

The first volume contains manors chiefly in the extreme west of Cornwall. Those in the second are in mid-Cornwall and the Lizard area. The third and fourth deal with the estates in the eastern half of the county. This order is probably that in which the maps were prepared. There is a very slight modification in style as the work progresses, and in the later volumes the surveyor developed the practice of prefacing the collection of maps of each manor by a key map of the whole, a very great help in identifying the estates on maps of the present day.

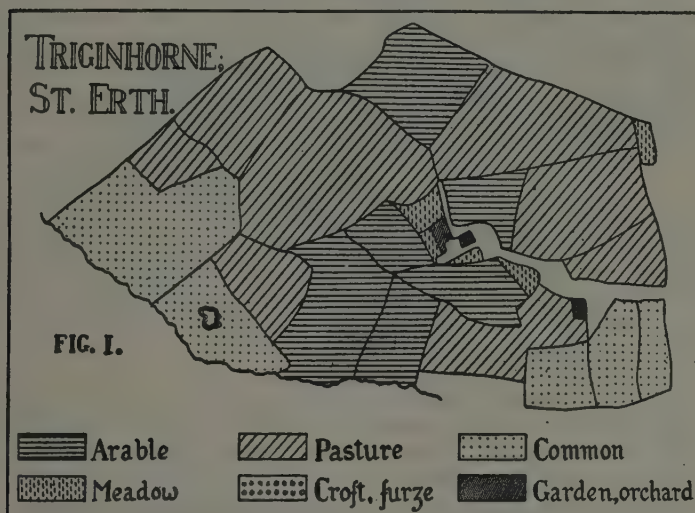
It is to the student of economic history that the atlas makes the most direct appeal. Every map is a land utilization map. All fields and garden plots are numbered—in a few instances lettered and a key gives the field name, land use and statutory and customary acreage. The fields are themselves coloured to indicate their land use and, in the case of a few of the larger enclosures, the field names also appear on the map. The categories of land use shown are :—

¹ C. H. Henderson, MS. note amongst his collection of Cornish MSS. at Truro.

² Martin, born 1695 at Gwennap, published his first parochial map of high quality in 1748 on a scale of 1 inch to 1 mile. See Boase and Courtney, *Bibl. Cornub.*

LANHYDROCK ATLAS

- I. ARABLE. The fields are tinted a light green, with parallel, thin, yellow-brown lines, about 1/10th inch apart, evidently suggestive of furrows.
- II. PASTURE. Also shaded light green, but with a mottled effect, produced with dabs of a darker shade.
- III. MEADOW. Light green, with superimposed the symbol now generally used for marsh.
- IV. FURZE. A peculiarly Cornish classification, is frequently shown by the same symbol as meadow. There is some uncertainty, however, and it rather seems that these symbols were put in by a less skilled hand. Sometimes dark green dashes on light green indicate pasture, and the mottling is used to represent furze. The key leaves no doubt, however, of the actual utilization.



- V. COMMONS, DOWNLAND, CLIFF PASTURES. Light green only.
- VI. ROADS. Light brown.
- VII. Areas wasted by mining are stippled in red.
- VIII. WATER. Blue.

It is remarkable how nearly the surveyor of 250 years ago approached the classification now adopted for the land utilization survey of this country.

The Atlas was compiled before all traces of the medieval field-systems had entirely disappeared, and many, probably most, of the farmsteads and townships show the medieval field-plan unaltered. Very broadly, the field patterns are of two kinds. The first may be called the 'in- and out-field' farmstead. An isolated farmstead, which probably comprised, besides the large house, dwellings for a small handful of workers, is surrounded by arable land and meadow. Beyond this is a belt of pasture land and outside the whole, furze and unreclaimed moorland. Tregonhorne (I, fo. 4, fig. I), Bosorne (I, fo. 22, fig. II) and Creney (III, fo. 4, fig. III) are typical examples of farmsteads of this plan, which appears more or less clearly throughout the county. Bosvellack in St. Allen

(II, fo. 15) has orchard and meadow in the immediate vicinity of the 'town place', followed by arable and then pasture. To the south, on the steeper slopes towards the river Allen, is a patch of woodland. The valley floor is occupied by 'moor', a strip of high marsh, waterlogged and difficult to cross in winter. On other sides is common, where the dwellers of the 'town place' exercised their ancient right to gather 'husbote' and 'haybote', to graze sheep and keep pigs and geese. On the north this common stretched away as far as 'The Western Road', the great ridgeway which has run, since prehistoric times, the length of the county. Another example is the big western manors of Trezilla and Mulfra (I, fo. 14-15). A row of farmsteads lies south of the moorland-ridge which stretches west from St. Ives. Each is surrounded by arable, for meadowland is rare here, pasture and then furze croft. Each unit has expanded along the hill-side, at the expense of the common, towards the neighbours so that they are no longer separated from one another by a strip of moorland. This latter process was carried on actively if surreptitiously when the survey was made. At Numphra (I, fo. 19) two plots had been enclosed from the Downs 'to your Lordships injury'. At Callestock Veor (II, fo. 18), a large field bears the note: 'The land which Mr Jonnes inclosed under a pretence of right from an Old Deede but ye fence was this yeare (by lords of the village of Callestock) broken downe and laid in comon as before, 1697'. On the farmstead of Carpuan, in St. Neot (IV, fo. 13), an area round the house was either arable or meadow, but that which lay beyond bore the notes 'thes feilds are called midle grounds' and 'these of Pasture are called Out grounds'.

This field pattern is one of great antiquity, probably dating from the dispersion of settlement, which preceded and followed the Roman occupation. The arable infield could be manured with household and farmyard waste, while portions of the outfield were broken up only at long intervals and then allowed to revert to pasture land again after two or three years' cropping (3). The 'furze' or 'croft', which is so frequently found on the outskirts of the farm is just such land as this. After several years cultivation, the portion of the outfield was abandoned and quickly colonized by furze rather than by its original moorland plant association. The furze was possibly encouraged, because, in this treeless county, it provided an important fuel (4). Carew described this process almost a hundred years earlier:—

'... about May, they cut up all the grasse of that ground, which must newly be broken into Turves, which they call Beating. These Turves they raise up somewhat in the midst, that the wind and the Sunne may the sooner drie them. . . . And after they have been thoroughly dried, the husbandman pileth them in little heaps, and so burneth them to ashes. Then do they bring in sand . . . A little before plowing time, they scatter abroad those Beatbroughs and small sand heaps upon the ground, which afterwards by the ploughes turning downe, give heat to the roote of the Corne. . . . The charges of this Beating, Burning, Scoding and Sanding, ordinarily amounteth to no less than 20s for every acre; which done the tiller can commonly take but two crops of wheat and two of oats and then is driven to give it at least seven or eight years leyre, and to make his breach elsewhere. . . .' (5)

The second type of field-system consists of intermingled strips in a common field. It has recently been pointed out that this pattern, generally considered typical of the 'fat and fertile plain', is more common in 'highland' Cornwall than had been supposed (6). It existed round most of the medieval towns, especially those, such as Penryn, Helston,

³ See H. L. Gray, *English Field Systems*, ch. v.

⁴ J. Norden, *Surveyor's Dialogue*, 1608, in Harrison's *Description of England* (1881), III.

⁵ R. Carew, *Survey of Cornwall* (1602), 19.

⁶ C. S. and C. S. Orwin, *The Open Fields*, 62, and A. L. Rowse, *Tudor Cornwall*, 33-4.

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Grampound and Truro, where an English influence was strong (7). None of these are shown in the atlas, but it is to be presumed that in a general way they followed the pattern set in lowland England. But an open field-system also occurred in parts of Cornwall, where English influences must have been of the slightest, at Land's End, and on the western side of the Lizard peninsula. It is difficult to believe that these strips were conditioned, like those of lowland England, by the requirements of the medieval

BOSORNE,
ST. JUST.

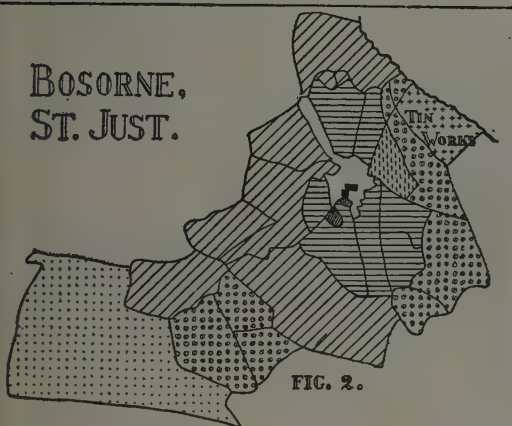


FIG. 2.

CRENEY,
LUXULLIAN

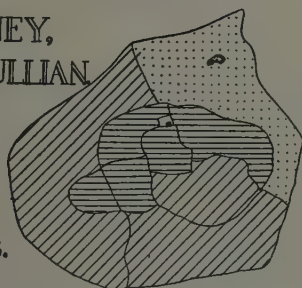


FIG. 3.

STITCHES AT GARRO,
MULLION.



FIG. 4.

STITCHES AT
BELUHALL,
ST. JUST.

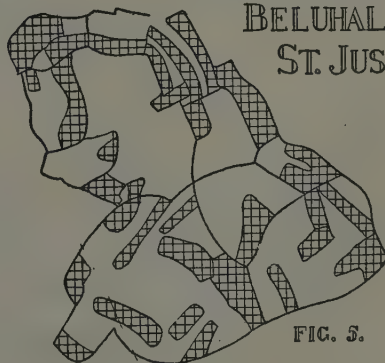


FIG. 5.

plough. Their shape is irregular ; they twist and turn in a manner that no heavy plough could follow, and if their length was suited to the capacity of the plough team, there must have been a very great variation in the strength of the medieval ox.

In a field at Beluhall, near Land's End (I, fo. 26, fig. v), thirty-one such stitches are coloured, with a total acreage of nearly 13 acres, composing a single tenement. The shapes of these 'stitches and quilllets' appear to satisfy no economic or technical requirement, and are probably a further concession to that spirit of equality at whose shrine,

⁷ See deeds in Henderson MSS. at Truro ; and *Topographer and Genealogist*, I, 226, quoting Harl. MS. 71.

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as Maitland has expressed it, every consideration of economy was sacrificed. The stitches at Garro, on the Predannack Downs in Mullion (II, fo. 51-2, fig. IV) are of a rather more 'normal' shape, but they too present a strange pattern; a large number of small, 'squarish' fields, each divided into several strips.

There was a type of open field which did not owe its form and origin to the technical considerations of medieval agriculture. This was the 'run-rig' system, in which a primitive equality alone characterized the division of the land (8). This system obtained in the hilly regions of northern England, and it is probable that these open fields in Cornwall are further examples. It thus appears that there were at least three contrasted field-systems in Cornwall, the in- and out-field farmstead, the open fields approximating to the English pattern, and the open fields of the run-rig type. The second of these is not illustrated in the Landhydrock Atlas, and is, in any case, susceptible of a simple explanation, but the first and third are peculiarly Cornish. They do not appear to reflect any differences between the geographical *milieus* in which they occur, and one can only suggest that they are due to differences in the social order at some remote period. Perhaps a passion for equality survived longest on the wild moorlands of the west.

The categories of land use which were used by the surveyor have already been given. They were far from being of equal importance, however, nor was the proportion of any one type of land constant throughout the county. Arable was relatively more extensive in the west; meadow and pasture in the east. The following figures give the acreages in the various categories in certain farmsteads in West, Mid and East Cornwall. The selection was made entirely at random, and must be taken to indicate the typical utilization in these regions. West Cornwall is approximately west of Truro; East Cornwall, east of the lower courses of the Fowey and Camel rivers.

WEST CORNWALL FARMSTEADS

	Arable	Meadow	Pasture	Furze	Orchard	Moor	Common	Wood
					Garden			
Bedrifty	24	I	3	22	-	-	24	-
(in Madron)								
Boswirgie	39	I	33	110	3	-	-	-
(in St. Erth)								
Nennis	110	6	24	51	-	2	3	-
(in Madron)								
Pengersick	77	3	77	55	-	4	17	-
(in Breage)								
Treglistian	87	3	43	95	4	11	-	-
(in Gwinear)								

MID-CORNWALL FARMSTEADS

	Arable	Meadow	Pasture	Furze	Orchard	Moor	Common	Wood
					Garden			
Bosvellack	52	6	20	7	5	5 (9)	67	13
(in St. Allen)								
Colan	183	20	54	71	6	11	-	2
Merther	83	I	60	23	3	6	-	4
Tregolls and Tregustick	109	24	79	2	2	I	104	5
(in St. Wenn).								

⁸ H. L. Gray, *English Field Systems*, 412.

⁹ There is a note that 3 of the 5 acres produced alder. Alder trees appear to have been more highly prized then than now (See Feet of Fines, 108, no. 203), and were very probably used for the making of sabots.

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EAST CORNWALL FARMS

		Arable	Meadow	Pasture	Furze	Orchard Garden	Moor	Common	Wood
Bokeddick	16	8	26	2	1	-	-	-	
(in Lanivet)									
Castle Dewey	8	17	40	36	2	-	-	-	
(in St. Neot)									
Hender	14	4	27	25	1	-	235	-	
(in Minster)									
Higher and Lower Bowden	9	7	17	7	2	-	-	10	
(in St. Neot)									
Lower Helland	61	12	47	-	-	-	-	67	
Outer Dewey	20	4	33	-	1	-	-	-	
(in St. Neot)									
Rosewarrack	69	13	150	-	3	-	-	-	
(in Lanivet)									
Shabber	14	-	24	12	-	-	-	-	
(in Cardinham)									
Treffry	46	44	56	5	5	-	93	20	
(in Lanhydrock)									
Treglostra	23	4	67	72	2	-	-	-	
(in Davidstow)									
Tremore	43	23	137	22	3	-	-	8	
(in Lanivet)									
Tupton	61	6	19	6	3	-	-	12	
(in Cardinham)									
Woodland	7	2	24	11	2	-	-	4	
(in St. Neot)									
Yetta	12	8	14	-	1	-	-	-	
(in Cardinham)									

The predominance of arable farming in West and Mid-Cornwall, and of pastoral farming in East, is at once apparent. During the first half of the next century, when Dr Borlase was collecting material for his *Natural History of Cornwall* and other works, he obtained first-hand descriptions of many parts of the county, and these, in the form of letters to the Doctor, have survived. Of St. Endellion, in the eastern third, one correspondent wrote 'We have some Arable here, but in general Champagne' (10). The Bodmin area 'is generally stocked with sheep' (11). In Mid-Cornwall, however, St. Allen parish, to the north of Truro, 'is generally in Tillage; some keep it lay but one year, some two, some three, seldom four years except Meadows' (12). In Creed, a parish in the Fal valley, 'the land is very rich and good either for Corn or Pasurage' (13). It is evident that the Atlas does not exaggerate the importance of arable farming in the west or of pastoral in the east.

Three reasons may be suggested for this division in the county. East Cornwall was a spinning region, tributary to the cloth-working industry of East Devon. Wool commanded a high price in the markets of Liskeard and Bodmin and tended in consequence to become the chief product of the surrounding countryside (14). Arable farming,

¹⁰ Original Letters, v/118-24. The letter books are preserved in the Morrab Library, Penzance.

¹¹ *ibid.* v/60.

¹² *ibid.* v/102-7.

¹³ *ibid.* v/69.

¹⁴ W. G. Hoskins, *Industry, Trade and People of Exeter*, p. 29, gives a map of the Cornish spinning area.

secondly, was dependent to an exceptional extent on manures, chiefly sand, seaweed and even bruised and damaged fish. These were more easily obtained in the west, with its restricted area and deep estuaries, than in the east. Lastly, the population of West Cornwall was increasing rapidly owing to migration of people from the east to work in the developing mines (15). The demand for grain crops in the west was complementary to that for wool in the east.

The value of the Lanhydrock Atlas lies chiefly in the light it throws on agriculture, but its interest is not limited to this. Field-names are given throughout the work, but without any great regard to their true forms. They are generally distorted and Anglicized. There are, nevertheless, a few of general interest. 'Pillers park' recalls the ancient and now extinct grain pillas; (16) 'the Bings,' 'White Bing' and 'Middle Bing', the medieval practice of screening off an area of pasture land each spring as a 'binghay', in which the grass was allowed to grow for hay (17). Occasionally an earthwork makes its appearance, as at Lesingey, or a fish cellar, as in Breage and again in St. Anthony-in-Meneage. Stamping mills for the mines are shown, and, here and there, land is marked as covered with the refuse of the mines themselves, but the Atlas only touches the fringe of the mining region proper. The sand dunes are seen to have encroached at Holywell Bay very considerably in the past 200 years; the site of Newquay was entirely grazing land. Nor had Wadebridge grown up beside its 15th century bridge across the Camel. Nevertheless, the face of Cornwall in 1700 was remarkably like that of today. The land use may have changed, and in some small areas the blighting hand of the miner has passed over the countryside, leaving red spoil heaps and the wreckage of mining equipment. But the field boundaries, ancient already in 1700, remain intact. Trees were scanty, then as now, and woodland slight and settlements sprinkled thinly over the face of the county.

¹⁵ See *Geography*, 1943, xxviii, 37.

¹⁶ See N. J. G. Pounds, 'Pillas, an Extinct Grain', *Devon and Cornwall Notes and Queries*, 1944, xxii, 199.

¹⁷ See Feet of Fines, 69, no. 138, and G. Oliver, *Monasticon Dioecesis Exoniensis* (1846), 42b.

Tiger and Dragon

by W. H. RIDDELL

THE accompanying illustrations are, to the best of my belief, the earliest Chinese *paintings* extant of Tiger and Dragon—those two mighty and mystical opposites in the Cosmogony of the Far East. I emphasize the word ‘*paintings*’ because a certain number of earlier attempts to portray tigers and dragons are in existence, either modelled in relief or incised in bronze or stone. There may, indeed, be more of them than we suspect, for in their earliest tentative manifestations these two beasts are not always easy to identify, and at times they are, like Caesar and Pompey, difficult to tell apart.

My illustrations are copies, nearly three times the size of the originals, of a tiger and dragon, painted in lacquer, upon the edge of a circular wooden dish or tray, 20 inches in diameter, which is now in the possession of the Imperial University of Tokyo. It was found in 1925 in a tomb in the north Korean province of Pyöng Yang, or Lolang. On the back of the tray, which is lacquered black, there is an inscription in red, written in the contemporary ‘*li-shu*’—official script. It states that the tray was made in the imperial factory of Chang-tu in the province of Szechwan (West China) in the 12th year of Yung Ping during the reign of Ming Ti of the later, or Eastern Han dynasty. There is no reason whatever to think that this date, which corresponds to our year A.D. 69, is unreliable.

We may note in passing that these two beasts are unquestionably *painted with a brush*; as was also the inscription at the back. There is, of course, no reason why they should not be, because the invention of the Chinese writing brush is traditionally ascribed to the year 221 B.C.—291 years before.

Reproductions in both chromoxylograph and collotype of this most interesting lacquer tray were published in the Japanese *Kokka* magazine for January 1928 (no. 446) but no reproduction of it, so far as I know, has appeared in any western publication except a rather poor one in *Eastern Art*, vol. III, 1931 (an annual published in Philadelphia, U.S.A.), which is little better than a blur. The *Kokka*’s chromoxylographic plate renders tiger and dragon in their actual size. This, however, is so small that their details remain difficult to appreciate without the aid of a strong magnifying glass. Hence the enlarged copies which I have here made.

I should mention that I have restored the dragon’s tail. A break in the edge of the tray has left of the tail nothing except its root and its upturned tip. Apart from this (legitimate?) addition, the two drawings are as exact copies of the originals as I could make them. The ground colour of the tray’s upper surface is dull orange, the pigment used being probably a preparation of red lead—*minium*—which the Chinese call *Hung tan*. The border, what is left of it, is black with a lozenge-and-scroll pattern in red. The prevailing colours of both dragon and tiger are various shades of green and olive brown, with occasional accents of black and red; the eyes alone, within their black orbits, being left in the background colour. The painter seems to have used three colours only; a malachite green, which the Chinese call *Che liu*; a cinnabar red, called *Chou cha*; and black, *Mo*. He obtained his various shades of green and brown by appropriate mixtures of green and red, assisted occasionally by a small addition of black. All these

colours have perished to some extent, the green tending towards grey, and the red tarnishing in places to a dull pink. The blacks also have dimmed with age. In translating the various tints into black and white I have adopted a certain convention. The orange background is rendered pale grey; the green of a deeper grey; the browns (mixture of green and red) by a yet deeper shade of grey (as in the lower half of the dragon); while I have indicated the few passages of red, this being the most salient colour, by pure white (as in the tiger's underparts). For black, where it occurs, I have naturally used black. As the colours employed are quite arbitrary (no one ever saw a green tiger) this seemed the most useful convention to adopt.

What will first strike an observer of these two minute drawings is their all-pervading nervous force—their passionate, almost tortured, energy, which, without exaggeration, one might term explosive. This dynamic energy is typical of almost all representational art during the Han period; as may be readily discovered from the innumerable rubbings of stone engravings which Professor Chavannes brought back from China and published in Paris in 1909 (1). In particular the drawings of the portly slender-legged horses of Han charioteers and cavalry exhibit constantly this furious pent-up energy as do also the many mythical beings with which these rubbings abound.

We may perhaps legitimately connect this extraordinarily free and worst method of suggesting living movement or *vitality* (the *Sheng tung* of Hsieh Ho's six principles) (2) with the traditional invention in China just before the Han period of the writing brush and its necessary complement Chinese ink (although the latter was probably known long before). These new inventions put into the hands of Chinese artists the most perfect tools ever known for recording by means of swift, untrammelled and modulated lines upon a flat surface (paper was not invented until A.D. 105) the dynamic energy inherent in their models.

Although practically all the works of these early painters have perished, numerous engravings from them, in rigid outline upon stone, have fortunately preserved for us, despite the medium, much of their character and spirit.

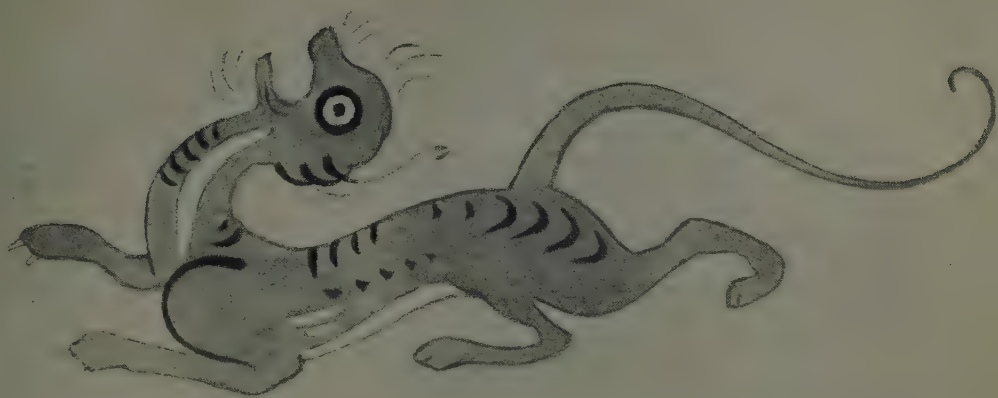
We cannot claim that the two drawings here reproduced are referable to any great artist of the period, but they are obviously something far superior to the routine productions of an artisan. They are not, it is true, so realistic as Han drawings of a somewhat later date. The tiger is far from being the tiger of immediately succeeding Chinese artists—workers in clay or stone; and the dragon (a glorified lizard) is still far from the standard pattern to which it shortly afterwards conformed. But the spirit and the life are there as only a sensitive artist could set them down. Already 'the tiger roars his incessant challenge to the unknown terror of the spirit,—that awful emblem, the dragon—born of cloud and mist' (3). Furthermore there is one small detail to which we might call attention. There are endless stories of artists before this time who hesitated, or even refused, to put in the pupils of their dragon's eyes lest they come to life and fly away. Our artist has allowed his tiger a manifest pupil to his eye; he has carefully refrained from doing a like service to his dragon; which, incidentally is very much the most spirited drawing of the two.

In Professor Chavannes' great publication we find one splendid drawing of a dragon which by rare good fortune is accompanied by a date—the year A.D. 171. This rubbing

¹ *Mission Archeologique dans la Chine Septentrionale*. (Paris, 1909).

² Hsieh Ho's small treatise, which contains his six principles or canons of painting, *Ku hwa p'in lu* did not see the light until the 5th century A.D.

³ This 'purple patch' is lifted with slight modifications from Kakuzo Okakura's *Ideals of the East* (Murray, 1905).



1



2

CHINESE PAINTINGS—1, TIGER ; 2, DRAGON

facing

TIGER AND DRAGON

from a stone engraving on the Stele of Li Hsi shows us a dragon which for the first time almost entirely conforms in its shape with the dragons of all succeeding Chinese painters (4). We may say, in fact, that one century (plus two years) later than the two drawings we are discussing, the form and appearance of the dragon was standardized once and for all. Thereafter it changes little until, together with its associated antagonist the tiger, it reaches its highest, most terrifying, manifestation in the pair of paintings by the Zen priest Muchi of Sung now preserved at Daitokuji, Kioto. These two pictures are also dated—5th year of Hsien Shun or A.D. 1269, which is exactly 12 centuries later than the first *painted* versions of tiger and dragon extant (5).

Were we to search for the origin of Tiger and Dragon in Chinese folk-lore we should instantly lose ourselves in the mists of antiquity. The two of them figure full-blown among the very earliest pictographs which are possibly before the second millennium B.C., and there can be little doubt that both were the spontaneous creations of the Chinese genius, owing little or nothing to any outside source. This does not necessarily mean that the Chinese race was wholly homogeneous. So great a civilization as is theirs could only be born from the clash of warring clans each with its separate ideals. No doubt such clashes took place long previous to any historical records. There is some small reason to believe that in the transition stages between neolithic and bronze ages one such clash took place. Dimly we may perceive settlers along the upper reaches of the Yellow river gradually working their way downstream through the riverine forests until one day they meet with another people who had worked their way equally gradually (there is no evidence of nomadism in ancient China) up this same river from the sea. For a short time during the aeneolithic period Chinese pottery, even as far inland as Kansu, is decorated occasionally with wave or spiral motives. Everyone will remember the Aeneolithic vase with superb wave-decoration which was No. 1 in the Chinese Exhibition at Burlington House 1935-6 (6). Now so far as we know such wave and spiral motives originate almost invariably among sea-faring or seaside-dwelling folk; witness for example the Minoan and Helladic cultures of the Levant; while the well known Greek Fret is only a succession of waves in profile reduced to rectilinear form (7). May we not therefore suppose that among the totems of the inland folk the Tiger, as king of their jungles, inevitably figured; and that, as inevitably, among the intruding sea-dwellers a totem of some sea creature, fabulous or not,—which afterwards became the dragon—figured in a like degree. Maybe that out of such a totemic encounter Tiger and Dragon first began to crystallize into their legendary and everlasting enmity (8).

⁴ This same stele of Li Hsi gives us also the first known Chinese landscape. Another reproduction of it will be found in Ferguson's *Outlines of Chinese Art* (Chicago, 1919).

⁵ Muchi's two pictures also bear inscriptions which may be roughly translated: (a) The roar of the tiger arouses the gale; (b) The flight of the dragon assembles the clouds. In my old home in the Midlands they would have been called 'Weather-breeders'.

⁶ Lent by the *Östasiatiska Samlingarna*, Stockholm. Reproductions in III. Catalogue, in Rene Grousset's *Civilisation of the East*, vol. III (Hamilton, 1934), and in George-Soulié de Morant's *Histoire de l'art Chinoise* (Paris, 1928).

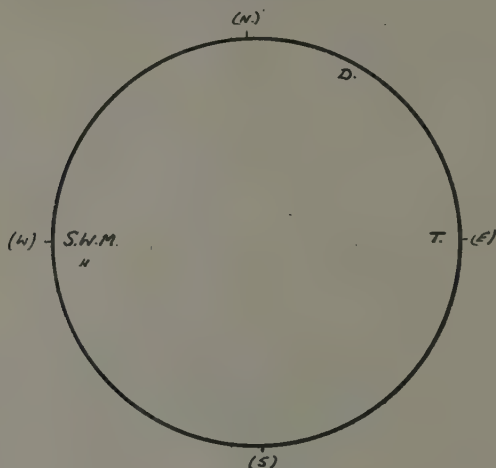
⁷ This type of decoration must not be confused with the so-called Celtic knot, derived from the plaiting of thongs, though the two often occur together. The spiral and the wave derive from shells and the sea—primarily; although at later dates the former may come from vine tendrils.

⁸ The sea-dwellers alluded to seem to have been finally driven south to become there the ancestors of the Miaotzu. They left behind them the well known *lei-wen* (thunder cloud) pattern made up of two opposing spirals and endlessly repeated on ancient bronzes. Spirals continued to play a small part in later Miaotzu decorations, see *Kokko*, vol. xvi, 1905-6.

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However likely, or unlikely, such speculations may be they undoubtedly carry me beyond my present purpose and, for that matter, far out of my depth.

To return then, for a moment to more concrete matters. There is, in addition to tiger and dragon, one other drawing along the edge of our tray's upper surface. It depicts a (Taoist ?) Deity with a celestial attendant set beneath a canopy (or tree ?) upon a precipitous mountain which appears to be sagging dangerously beneath their weight, for it is very little larger than they. A not easily identifiable animal, galloping towards them from the right completes the picture. This drawing, unless I am much mistaken, is meant to represent Si Wang Mu, Queen Mother of the West, and her attendant Tung Wang Kung. The dubious animal, seeing that it has large ears and no visible tail, is probably intended to be the hare which dwells in the moon ; for this beast, together with



S.W.M. SI WANG MU AND ATTENDANT
H. HARE ? T. TIGER. D. DRAGON

(Letters in brackets indicate the compass points)

the three-legged raven of the sun, is a constant attendant on Si Wang Mu. The colours in this painting are more brilliant than in tiger or dragon, and, besides green and red, there is an additional colour—a yellow which, I suspect, was originally cream or white. As this little picture has been adequately reproduced in vol. III of the *Eastern Art Annual* (op. cit.) and in Otto Fischer's *Kunst Indiens Chinas und Japans* (Berlin, 1928), it is unnecessary to dwell upon it further here. My only reason for mentioning it was to attempt an identification of its subject and to call attention to what is, to me, one of the chief puzzles of this tray.

The three drawings on the tray's upper surface are all close to the border and are all extremely small in proportion to the wide blank area of the tray itself. Moreover they are distributed round the edge in a curiously unsymmetrical and haphazard fashion as may be seen in the accompanying diagram, where the situation of Si Wang Mu is indicated by the letters S.W.M., the dragon by D, the tiger by T, and the hare (?) by H.

TIGER AND DRAGON

Now if the Tiger and Dragon had any astronomical significance here, if they were the White Tiger of the West and the Green Dragon of the East, they ought to appear diametrically opposite to each other; whereas they are separated by no more than 60° instead of 180° . Also the logical place for Si Wang Mu would be at the West point; where, in fact, I have placed her in the diagram. This being so, we have to think out some purpose, other than astronomical, to account for the eccentric placing of tiger and dragon on the tray.

My solution of this problem, which I can hardly hope will be accepted, is this:—The decorations of this tray were carried out at the Imperial factory of Cheng tu to the order of an important Chinese official who was getting on in years and whose name, we have every reason to believe, was Wang Hsü. I picture him a rather precise, fussy, and self-centred old gentleman who intended the three drawings on his tray to symbolize three important events in his career. Si Wang Mu (if this indeed be her) he intended to stand for the place where he was born, which, I suggest, was actually the then important *Western* city, Cheng tu. Later in life his duties as a high official carried him to some place far East of Cheng tu—somewhere out Nanking-way. This place, whatever it was, he arranged to have marked on the tray, and its compass bearing from Cheng tu indicated by the Tiger. When still later he was shifted on, or promoted, to take charge of the Chinese colony then established in northern Korea, he had this place also and its *north-easterly* direction from Cheng tu marked on the tray by the Dragon. Finally he died in Korea—this much at least we know—and was buried there with, amongst other things, his precious tray; for there, only the other day, it was unearthed (9).

Can anyone suggest a better explanation? (10).

⁹ It is not quite clear whether the tray was found in Wang Hsü's tomb or in another close by. From what I can make out it was the former. As the Chinese proverb aptly puts it; 'A little study reveals the need for more'.

¹⁰ The three beasts on this tray—dragon, hare, tiger, are, it is true the 3rd, 4th and 5th respectively of the 12 Chinese Zodiacal signs. Its date, A.D. 69, is the 5th year of the sexagenary cycle beginning A.D. 64. This is the year of the Tiger; A.D. 67 and 68 being years of the Dragon and the Hare. But when this tray was painted this method of recording dates was in its infancy and probably not yet in general use.

Saint Congar

by REV. CANON G. H. DOBLE

IN the parish of Lanivet in mid-Cornwall, in a lonely spot at the bottom of a hill, $1\frac{1}{4}$ miles east of Lanivet church and about 2 miles south of Bodmin, is a farm called St. Ingonger (St. Gonger 1588, but in 1284 Stungongar), on which is the site of a chapel, with a cross and holy well. I hope to show in the following pages that this apparently insignificant little place provides a valuable clue to the rediscovery of the true story of a once well-known saint, who must have played an important part in the great monastic and missionary movement which began in Wales in the 5th century, and, after evangelizing Somerset, Devon and Cornwall, crossed the Channel and helped to create Christian Brittany. It is worth while making some attempt to do this, for most of the statements in the medieval *Life of S. Congar* are far from true and have misled scholars for centuries.

The name Ingonger, if really ancient, might be an expanded form of Congar. There are several other examples of the use of this prefix to the name of a Celtic saint, such as Ingenoc (mentioned in the *Life of S. Winnoc* as his companion—he seems to be the Connoc who has given his name to Boconnoc and other places in Cornwall and Brittany), Endellion and perhaps Indract. It may be, however, that 'St. Ingonger' is only a corruption of the 13th century Stungongar (1). In any case it is certain that the site owes its name to S. Congar.

It will be necessary to begin with a brief survey of the area of his cult.

S. Congar is a pan-Celtic saint. No other chapel is dedicated to him in Cornwall, but there is a place called Tregunger (2) in the parish of St. Clether, north of Bodmin, and, as we shall see, there is reason for supposing that S. Congar may have been associated with the eponym of St. Clether. In Brittany he is the patron saint of Landéda (3), on the coast of Léon, near Lannilis; and a little to the south of Landéda, in the parish of

¹ Stungongar must mean either 'Bend' (*stum*) or 'Extent' (or 'Grant' -*ystyn*) 'of Congar'. Langdon (*Old Cornish Crosses*, 1896, p. 52) gives three modern spellings of the name—'St. Ingonger, Gunger, or Gonger as it is locally called', but says the cross is called 'St. Gonger Cross'. The Lysons refer to it on pp. 174-5 of the volume on Cornwall in their *Magna Britannia*, printed in 1814, and say, 'At St. Congar, in this parish, said to have been in ancient times the residence of a hermit, was a chapel and well, dedicated to that saint'. The late Mr Charles Henderson, in some unpublished notes, says, 'the chapel has wholly disappeared. The cross is built into the hedge at the turning to Fenton-Pits above the farm, while the so-called Holy Well is reduced to a mere drain or gutter. It was perfectly dry on the occasion of my visit. It lies in a cul-de-sac lane below the farmyard, and is covered by a low superstructure of unhewn stone. In spite of the absence of documentary evidence and of any remains, persistent tradition and the name of the estate prove conclusively that a chapel existed here in Celtic times'. Fenton must get its name from this holy well.

² Tregonger in 1666.

³ 'Saint Gongard' in the diocesan Ordo. See the *Bulletin de la Soc. Arch. de Finistère*, 1904, p. 311.

Plouzané, about six miles west of Brest, is a place called Langongar (i.e. 'Monastery' or 'Hermitage of Congar'). In the SE. of Brittany, near Redon, in the diocese of Vannes, is a parish of Saint-Congard (4). The name appears in five other Breton place-names, mostly in the west of the province. In the parish of Ploujean, N. of Morlaix, are a Coet Congar (5) and a Roscongar, and near Hénansal (E. of St.-Brieuc) is a place called Launay-Congar. In the south of Cornouaille we find a manor of Kergongar in Melgven near Rosporden (6), and a Lescongar in the parish of Plouhinec, near Audierne. Some of these may be secular names. A Congar appears in the lists of the Counts of Cornouaille in the Cartularies of Landévennec, Quimper and Quimperlé (7), and Les-Congar might be the name of his residence. On the other hand, there are numerous *Les* names in the Cap-Sizun district and at least two of them (Les-Mahalon in Mahalon and Lescoff in Plougoff) seem to mark the residence of the eponym of a parish. Plouhinec is dedicated to S. Winnoc, who is honoured near Lanivet.

In Wales a S. Congar is honoured at Llangefni in Anglesey, which is called Villa Sti. Cungari in a document dating from the end of the 15th century (8) and *plwyf* [= parish of] Kyngar in a 16th century list of the parishes of Wales (9). Not far away, near Criccieth in Carnarvonshire, is an Ynys Gyngar. In Flintshire the same saint is the patron of Hope, formerly called Llangyngar and Plwyf Cyngar. Edward Lhwyd in his *Itinerary* (1699) stated that the holy well 'Fynnon Gyngar', is 'within a field of the church'. The parish feast at Llangefni is on 7 November (10), and on the same date at Hope (11). It is, no doubt, owing to the cult of S. Cyngar at Llangefni that the author of the 12th century Life of S. Cybi, the patron of Holyhead in Anglesey, says that Kengair was one of his ten disciples, and later introduces into his narrative a 'cousin' of the saint, called Kengar, an old man who lives entirely on milk and for whom S. Kepius has to provide a cow (12). It is a common proceeding with hagiographers of this period to make the saints of adjoining churches into disciples or relatives of their particular hero. The Cyngar honoured in North Wales must have had a considerable cult in the Middle Ages, since his name is found on 7 November in a large number of Welsh kalendars of the 15th and 16th centuries, and in three rather late martyrologies (13). It was for this reason that the Bollandists printed the *Vita S. Congari* under 7 November in the third November volume of the *Acta Sanctorum* in 1910. But since in Somerset, where that Vita was written, S. Congar is (as we shall see) invariably found honoured on a different

⁴ Congar has remained a personal name in Brittany; a well-known theologian is called Père Congar.

⁵ *Bull. dioc. d'histoire de Quimper*, 1935, p. 208.

⁶ *ib.* 1933, p. 187.

⁷ Concar in the first, Congar in the last two.

⁸ *Arch. Camb.* ser. I, t. IV, pp. 262-4. The tenants of the villa hold of the saint—'Sti Cyngari a quo tenentes tenent'.

⁹ Grosjean, *Cyngar Sant* (Anal. Boll. tom XLII), p. 106, note 7.

¹⁰ *Arch. Camb.* loc. cit., *Hist. of the Island of Anglesey* 1775, p. 57

¹¹ Edw. Lhwyd says 'Their wake is on Gwyl Gynzar vizt ye Sunday after ye eleventh of November', but this seems a slip.

¹² *Vita S. Kebii*, Brit. Mus. Vesp. A, XIV, printed in W. J. Rees, *Lives of the Cambro British Saints* (I shall refer to this edition as C.B.S.), pp. 183-4.

¹³ Cod. Brit. Mus. Reg. 2 A, XIII, written about 1220-2, 'most probably near Gloucester, or somewhere in the sw.' (Warner and Gilson); the Altempis Martyrology, written at Norwich in the 14th century, and the Norwich Martyrology, 'closely akin to the last-named', (B.M. Cotton MSS. Julius B, VII).

day (27 November), it would appear that he is a different person from the Cyngar of Hope and Llangefni.

In Pembrokeshire there is a Llanwngar 3 miles east of St. Davids.

In the *Vita S. Dubricii* in the *Liber Landavensis* a Congur is found, in the list of that saint's disciples, and a monastery in Gower is called Lann Conuur and Cella Conguri in a charter following the *Vita S. Oudocei* (14).

In none of these three countries has any Life of the saint been preserved, nor have any traditions about him survived (with the exception of one Saint-Congard legend to which I shall refer later). Nor does any place in Cornwall, Brittany or Wales claim to possess his relics. His name is not found in any Breton or Cornish kalendar or martyrology. But in Somerset we find his cult strongly established at an early period. A monastery called Cungresbyri is mentioned in the 9th century, and the church of a parish near Congresbury, called Badgworth, which may have belonged to it, is dedicated to him. There are numerous references to S. Congar's body resting at Congresbury all through the Middle Ages, and most Somerset kalendars contain his festival.

The first mention of Congresbury is in Bishop Asser's *Life of King Alfred*. He tells us how the king sent for him one Christmas Eve (the year is not given) and bestowed on him 'two monasteries, which are called in the Saxon tongue Cungresbyri and Banuville, together with a very valuable silk pallium and as much incense as a strong man could carry' (15). Unfortunately no mention is made of the saints honoured in these two monasteries. A hundred and thirty years later, however, we have a definite statement that the body of Saint Congar was buried at Congresbury, in the document entitled 'Resting Places of the Saints', written about the year 1000, and consisting of a list of saints whose bodies were possessed by English churches (16). The Anglo-Saxon version of this work (Brit. Mus., Stowe 960 and C.C.C. Camb., 201) says, 'Thonne resteth sanctus Congarus, confessor, on Cungresbyrig'. The entry is practically the same in the Latin version (B.M. Cotton Vitellius A. 11): 'Sanctusque Congarus in loco qui dicitur Cungresbyrig'. A list of saints honoured in the West of England, of much later date (14th century), also in the British Museum (Harley mss. 3776), has the following entry: '124. Apud Congresbery, que distat a Bristollia x mil., jacet Sts. Congarus'. There are several references in wills of the 15th and 16th centuries to the light kept burning in Congresbury church before his shrine (or statue). Thus in 1411 'William Felawe, called Congresbury, Rector of Portishead', left a bequest 'to the lights of St. Katherine, St.

¹⁴ *The Book of Llan Dav* (ed. J. Gwenogvryn Evans and John Rees, 1893). I shall refer to this as 'B.L.D.'), pp. 80, 144-5.

¹⁵ 'Cumque ab eo frequenter licentiam revertendi [to St. Davids] quaererem, et nullo modo impetrare possem; tandem . . . diluculo vigiliae Natalis Domini advocatus ad eum; tradidit mihi duas epistolas, in quibus erat multiplex supputatio omnium rerum quae erant in duobus monasteriis, quae Saxonice cognominantur Cungresbury et Banuville, et mihi eodem die tradidit illa duo monasteria cum omnibus quae in eis erant'. (p. 68 of W. H. Stevenson's edition of Asser, Oxford, 1904. He says, 'Nothing is known of the monasteries there beyond the present passage'). No doubt both Congresbury and Banwell had long been important Celtic monasteries (the word *Saxonice* suggests that they had originally borne Celtic names). The West Saxon kings constantly handed over to diocesan bishops of their own appointment suppressed, or derelict, religious houses founded in Celtic times. If only Alfred's 'two epistles' had been preserved, we should know much that we greatly want to know about Congresbury and Banwell.

¹⁶ Printed by F. Liebermann in *Die Heiligen Englands* (Hannover 1889), and by W. de Gray Birch in the *Register of Hyde Abbey*, 1892. Congresbury and Glastonbury are the only pilgrim shrines in Somerset mentioned in this very important document.

Nicholas and St. Congar', and in 1501 Wm. Nedys directed that he was 'to be buried in the church of St. Congar', and left 'to St. Conggur a heffer, to find a light'.

With the exception of the statement in the 'Resting Places', nothing is known of Congresbury between the time of Alfred and the reign of King Cnut, who gave his mass-priest (chaplain) Dudoc the same estates Alfred had given Asser, viz., Congresbury and Banwell. In 1033 Dudoc became Bishop of Wells, and at his death (in 1060), bequeathed them to the See. Earl Harold, however, interfered and seized Congresbury and Banwell, and although Dudoc's successor, Bishop Giso, persuaded William the Conqueror to restore Banwell, the Church of Wells did not recover Congresbury till the time of King John.

In the middle of the 11th century, then, the clergy of Wells were particularly interested in Congresbury. Its saint was no doubt commemorated in the services of the cathedral and his name begins to appear (always on 27 November) in Somerset kalendars.

The earliest of these is that found in Brit. Mus. Cotton ms. Vit. A, xviii (17). It is a Wells kalendar belonging to the episcopate of Bishop Giso (1061-1088) and contains on 27 November the entry:—'*Sancti Congari confessoris*'.

The second (Cambridge Univ. Libr. ms. Kk, v. 32) is described by Mr F. Wormald (18) as 'West Country, late xi cent.' (it contains the names of S. Nectan, S. Petroc and S. Neot). In this the entry '*Sancti Congari confessoris*' is an addition.

The late Dean of Wells, Dr J. Armitage Robinson, discovered two other references to S. Congar in Wells liturgical documents of the 15th century. In 1927 he found that 'a leaf of parchment, measuring 16½ inches by 12 inches, in a handwriting of the 15th century, torn from a Wells breviary . . . folded and used as the cover of the Communar's Accounts of the year ending Michaelmas 1591', contained, among other collects for Saints' Days, one for the feast of S. Cungar.

'Sancti Cungari secundum usum Well'. Or[acio].

Deus qui beatum Cungarum fide et moribus preclarum ad regna transtulisti celestia: fac nobis ipsius suffragiis hostium nostrorum oblectamenta inoffensis gressibus transire, et per grata temporalium incrementa eterne prosperitatis premia sentire. Per'.

He also discovered that a manuscript in the British Museum (Add. ms. 6059) contains a Wells kalendar, written in 1463, with the name of S. Congar:

'27 Nov. Sci. Congari cf. [= confessoris] Well' iii l[e]c[tiones] Well' (19).

Two Somerset monasteries honoured S. Congar. The 13th century kalendar of the breviary of Muchelney Abbey has on 27 November the entry (written in blue and red, as a sign that it was a principal feast): '*S. Cunegari confessoris*' (20). The late 14th century kalendar of the Priory of Dunster (a cell of Bath Abbey) (21) has on the same day: '*S. Congari confessoris*. 3 lc'.

S. Congar is also invoked in the Litany of a Psalter from Winchester of about 1060 (22).

¹⁷ Printed by Mr F. Wormald in *English Kalendars before A.D. 1100* (Henry Bradshaw Society, 1934), pp. 99-111.

¹⁸ *ib.* p. 71.

¹⁹ *Journal of Theological Studies*, 1928, pp. 1, 4.

²⁰ Brit. Mus., Add. MSS. 43405, 43406, see J. Armitage Robinson, *Muchelney Memoranda* (Somerset Record Society, vol. XLII), p. 58.

²¹ B.M. Add. MSS. 10628, printed in *English Benedictine Kalendars after 1100* (edited by F. Wormald for the H.B.S., 1938), pp. 145-60.

²² B.M. Arundel MSS. 60, f. 131b, (see Wormald, *op. cit.*, p. 148).

We have thus plenty of evidence for the cult of S. Congar at Congresbury, at Wells Cathedral and throughout Somerset during the Middle Ages. It is surprising, then, to find that Congresbury church is not dedicated to S. Congar but to S. Andrew. S. Andrew is the patron saint of the cathedral, and he seems to have taken the place of the old local saint both at Congresbury and at Banwell when they definitely became diocesan property. Perhaps the fact that S. Congar's day is only three days before that of S. Andrew may have led to the two festivals being combined in the observance of the Patronal Feast. The annual Fair is on 14 September, for some reason unknown (23). We have seen that in any case S. Congar continued to be honoured there till the Reformation.

At some time during the 11th or 12th centuries an attempt was made in Somerset to write a Life of the eponym of Congresbury. This Life, in its complete form, has only come down to us in a 16th century text, part of a bundle of fifteen Lives, all from the same source, added to the first printed edition of the famous collection of Lives of English and British saints called *Nova Legenda Anglie* (24), when it appeared in 1516. The previous edition, written in 1499, contained none of them. It is to be remarked that three (25) of these Lives, in addition to that of S. Congar, are of saints specially honoured in Somerset. But in 1918 the late Dean of Wells discovered 'a fragment of parchment, used as the cover of a paper book written about the beginning of the 17th century'. This parchment binding had been 'cut out of a book of the Gospels, written at the end of the 10th or the beginning of the 11th century'. It must have been a blank page, on which had afterwards been written, in a hand of the middle of the 12th century, part of the service for Maunday Thursday. This is followed by what proved to be the greater part of a much older version of the *De Sancto Cungaro* than that in *Nova Legenda Anglie*. The last five chapters only are missing. Dr Robinson published in 1919 in *The Journal of Theological Studies* (26) a critical edition of this imperfect Life, and in a subsequent issue (26^a) added some valuable Notes and Studies on the problems it presents. His discovery aroused great interest among scholars and led to a searching investigation into the whole subject of the cult of S. Congar by Father Grosjean, the Bollandist, in an article entitled *Cyngar Sant*, to which I have already referred.

I shall follow the example of Dr Robinson and Fr. Grosjean by calling these two versions of the Life of S. Cungar, the earlier and fragmentary one and the later and complete one, 'W' and 'H' respectively.

To enable the reader to follow the remarks I propose to make about them, it will be necessary to begin with an analysis of their contents. There is no need to reprint either the Latin versions, now easily accessible, or Dr Robinson's critical apparatus, and to give a full translation of the loads of verbiage and worthless rhetorical amplifications (meant to be pious reflections) with which the narrative is encumbered would be tedious in the extreme—a literal translation of some passages would sound ludicrous to the modern reader. I will try, however, to keep as near as I can to the original, following W as far as it goes, noting a few of the variant readings of H (many of which are of no particular interest), and supplying from the latter the chapters missing in W.

²³ The whole question is discussed by Fr. Grosjean, *op. cit.* pp. 111-16.

²⁴ The most easily accessible edition is that by Dr Carl Horstman, Oxford, 1901. The *De Sancto Cungaro, heremita et confessore* is printed in vol. I, pp. 248-54.

²⁵ Those of S. Decuman, patron of Watchet, of King Edgar and of S. Joseph of Arimathea.

²⁶ Vol. xx, no. 78, pp. 97-108.

^{26^a} Vol. xxiii, no. 89, pp. 15-22.

SAINT CONGAR

There is no title to the Life of S. Congar (27) in W. It begins abruptly with the rubric :—

‘ HERE BEGIN THE [HEADINGS OF THE] CHAPTERS (28) OF THE FOLLOWING BOOK.

- (1) Of the prayers and fasts of the parents of S. Congar in order to banish [the mother's] barrenness.
- (2) Of the boy's conception and nativity.
- (3) Of his election by God, his most devout life and how he departed [from his home].
- (4) How the citizens followed him.
- (5) Of his pilgrimage.
- (6) Of the revelation made to him by an angel, and how he came to the Summer Region.
- (7) How an angel warned him in a dream.
- (8) How he used to fast and bathe in cold water.
- (9) How a reedy fen became a meadow.
- (10) How [his] staff grew into a yew tree.
- (11) Of King Ini's gift.
- (12) How King Edgar was blinded.
- (13) How [the saint] withdrew to Wales (Gualia).
- (14) [Cut away by the binder].
- (15) How King Poulentus was blinded.
- (16) How Prince Pebiau was liquefied.
- (17) Of the most holy Congar's death '.

(Each of these headings is repeated, in capital letters, before the chapter it summarizes).

(1) A certain emperor of Constantinople earnestly hoped to beget a child of his empress Luciria, but in vain. So they began assiduously to fast, to give alms, and to pray faithfully and unceasingly to Almighty God that the Giver of all gifts would give (29) them a son to succeed his father and reign after his death. And by God's mercy their prayers were heard and their alms accepted.

(2) The most religious empress conceives (30) and bears a son, to the joy of his parents and 'compatriots'. The nobles and great men come to the Imperial Court, giving praise to the goodness of the Giver [of all good things] Who had heard their prayer.

(3) The child grows up into a handsome youth, so charming that many a king and queen desired to have him as a husband for their daughter. Finally, the daughter of a most noble king is betrothed to him. But he, despising all glory that passes away, had resolved to keep his virginity inviolate, and left the court in the disguise of a beggar, telling nobody of his intentions. Guided by God's inspiration, he arrived at the shores of the Tyrrhene Sea. When (31) he should have been hunting in the woods, he used to betake himself, without anyone knowing it, to a place of prayer (*divinum oratorium*),

²⁷ The name is uniformly spelt *Cungarus* both in W. and H.

²⁸ There are no headings in H., but each chapter begins with an extra-large capital letter.

²⁹ *Omnium donorum donator donaret.*

³⁰ *Feliciter concepit et post conceptionem feliciter genuit filium.* cf. *Vita S. Iltuti*, c. 1. (C.B.S., p. 159), 'concepit, et post conceptionem feliciter genuit filium', and *Vita S. Gundlei*, c. 2 (C.B.S., p. 146), 'concepit; post conceptionem filium feliciter Cadocum generavit'.

³¹ The following passage (down to the end of the chapter) is very unsuitable in its present position. It should of course have preceded the story of his flight from the court.

repeating over and over again the Lord's Prayer. When he was urged by the courtiers to play at dice, he would forsake them, without regard for their entreaties, and hasten to *ecclesiastica oracula* (32), where he would long remain, genuflecting and praying earnestly. Instead of coming to the Emperor's banquet, he would content himself with a frugal supper, frequently fasting, till all who saw and heard of his doings rejoiced over the young man's marvellous devotion and fervour.

(4) His parents were grieved over the departure of their only son, and their subjects, also greatly troubled, set out, at the Emperor's command, to follow the young man, and, if they could find him, bring him back by force. They hastened after him to the shore of the sea. A ship was there, ready to sail. The young man saw the pursuers coming and that he had a chance of escaping in a ship whose sails were already set, while a favourable wind was blowing. He safely reached the shore (33), and thus escaped the pursuit he dreaded.

(5) [The writer begins anew (after a needless repetition of what he has just said) to describe Cungar's hatred for the worldly life of the Imperial court, and adds a statement that he avoided tournaments, being resolved to fight only against our ancient enemy (Satan). Chosen to succeed his father as Emperor, he preferred the choice of a heavenly Father, and of his own free will chose (34) to forsake his native land and become a pilgrim, bearing in mind the Gospel precept (34a) and determined to fulfil the same].

(6) Cungar wished to put as great a distance as possible between himself and his home, for fear, if his family heard that he was still in the vicinity, they would make fresh efforts to persuade him to return. So, instructed by an angel, he departed from the shores of the Tirrene Sea and came to Italy, from Italy he crossed the Alps to Gaul, and from Gaul he sailed to Britain. He desired above all things to live the solitary life, wherefore he made enquiries, during the course of his journey, as to places suitable for a hermit to live in (35). With this end in view, he made his way to the district which the natives called, and still call (36), the 'Summer Region' (37). Guided by a fresh angelic revelation, he finally came to a most attractive place, shut in by water and reed-beds, afterwards called after him *Cungrisberia*. For Cungar was called back to the [land of the] Britons (38), and, very properly, sowed the rivers of his doctrine (39) throughout

³² *Oraculum* is used in the *Vita S. Dubricii* (B.L.D., p. 81) to mean a chapel.

³³ The writer forgets that he has already brought his hero to the shore (in c. 3).

³⁴ *Elegerant . . . electionem . . . Electus . . . elegit*.

^{34a} Matt. 10: 37, combined with Luke 14: 26.

³⁵ cf. *Vita S. Nectani*, Gotha ms. I, 81, f. 51a, 'ut terram heremitice vite aptam . . . ingrederetur . . . didicerunt tam in Devoniam quam in Cornubiam . . . multa esse loca nemorosa et vite heremitice aptissima'.

³⁶ 'Quam sic incolae nominabant et nominant', cf. *Vitae Gildae* (Mommensen's ed. 110, 20) nominata fuit et adhuc nominatur a Britannis indigenis'; *Vita S. Gundlei* (c. 9), 'qui nunc manet et manebit . . . Unde nominatus, et nominatur Fons Gundliu'; and *Vita S. Tathei* (C.B.S., p. 264), 'patrem vocabant et adhuc vocant indigene'.

³⁷ H. alters to *Scmersete*.

³⁸ H. has altered the words and meaning of this sentence, and inserted a statement that Cungar is known among the Welsh as *Docuinus*. The question of this insertion, which is of vital importance to the hagiographical student, will be dealt with in part 2.

³⁹ 'Doctrinae sue fluentia seminabat per patriam'. This phrase is made up of a clumsy combination of two plagiarisms,—one from the *Vita Cadoci*, c. 7 (C.B.S., p. 36), 'fluenta doctrina flagrantius sitiens . . . patriae', the other from the *Vita Gildae* (109, 33), 'docuit . . . seminans semen . . . celestis doctrinae'.

his native land (*patna*),—wherever he went, he ceased not to preach, according to the Apostle's precept. Whatever was given him by kings and rich men, he at once distributed to the poor (40).

(7) While Congar was purposing to stay in this place, it was revealed to him by an angel in a dream (41) that next day he would see a boar, and that the place where he should see it was to be the site on which he was to build a place to dwell in (*habitaculum*) and, after that, an oratory. On awaking, he rejoiced greatly, and, on going forth, he unexpectedly came across a boar lying in a reedy spot. The boar took fright and fled. The most holy Congar observed the beauty of the place, with its woods and waters, and exclaimed with rapture, 'This is the place I have sought for. Here will I abide and serve the Holy Trinity'. He proceeded to build the *habitaculum* and mark out the bounds of the cemetery. Having done so, he founded an oratory in honour of the Holy Trinity (42).

(8) He continued for a long time in this place, which pleased him well, wearing a *cilicium* (under-garment of goat's hair), living a blameless life, fasting and praying continually. Every morning he plunged himself in cold water, staying in it till he had said the Lord's Prayer three times, after which he returned to the church and remained there in vigil and prayer addressed to the Creator of all things (43). But at the ninth hour he took some barley bread (44), though he never had a full meal. His body became emaciated, and to see him you would think him fever-stricken (44a). Most dear to him

⁴⁰ 'Omnia que dabantur illi, a regibus et divitibus, data continuo erogabat pauperibus'. cf. *Vita Iltuti*, c. 11 (C.B.S., 167), 'largiter dabat quicquid dabant in manibus'; and *Vita S. Tathei* (C.B.S., p. 264), 'quicquid dabatur illi, largiter dabat'; and *Vita Gildae* (107, 13), 'quicquid dabatur ei, continuo impendebat pauperibus'.

⁴¹ This story is imitated from an exactly similar one in the *Vita Cadoci*, c. 5 (C.B.S., pp. 33, 4), 'arundinetum . . . angelus Domini apparuit in sompnis, dicens ei, Oratio tua exaudita est . . . locum edificandi oratorii invenies . . . aprum perspicies . . . fundamentum templi tui in nomine Sancte Trinitatis jacias'.

⁴² 'Construxit habitaculum . . . cimiterium. Hoc emenso, fundavit in honore sanctae Trinitatis oratorium'. Cf. *Vita S. Dubricii* (B.L.D., pp. 80, 81), 'angelus per somnium dicens . . . ubicunque inveneris suum . . . funda in nomine sancte Trinitatis habitaculum simul et oraculum'; *Vita S. Iltuti*, c. 7 (C.B.S., p. 163), 'construens habitaculum, presule Dubricio designante cimiterii modum, et in medio, in honore summe at individue Trinitatis, oratorii fundamentum'. The Breton monk Wrmonoc, in his *Vita Pauli Aureliani*, twice describes the foundation of a monastery by S. Paul of Léon as consisting of the building of 'habitacula et parvum oratorium'.

⁴³ 'Omni hora matutina intrabat in frigidam aquam, ibi permanens quandiu diceretur ab eo tribus vicibus dominica oratio, revertebatur ad ecclesiam vigilans et exorans summi creatoris omnipotentiam'. This sentence is found, in almost identical terms, in three contemporary Lives, those of S. Gildas, S. Iltut and S. Gundleus (Gwynllyw). In the *Vita Gildae* (M. 107, 17) it runs 'Fluvialem aquam intrare solebat media nocte, ubi manebat stabilitus donec diceretur ab ipso ter oratio dominica: . . . repetebat suum oratorium; ibi exorabat genuflectendo divinam maiestatem usque diem clarum': in the *Vita Iltuti*, 'Nocte media ante matutinas abluabat se aqua frigida, sic sustinens, quamdiu posset ter dici oratio dominica; deinde visitat ecclesiam, genuflectens atque orans summi conditoris omnipotentiam' (c. 7): in the *Vita S. Gundlei* (c. 6), 'Nocte enim media surgebant de lectulis, et redibant post lavacrum lateribus frigidissimis, inde induti visitabant ecclesiam, exorando et inclinando usque diem ante aras'.

⁴⁴ This detail is in the *Vita Iltuti*, c. 19, 'hora nona . . . panis unus ordeiceus'.

^{44a} 'Macies tenuaverat corpus macrum: talem videntes dicebant illum esse languidum aut febricitatum'. cf. *Vita Gildae* (M. 107, 17), 'Macies apparebat in facie; quasi quidam febricitans videbatur; *Vita S. Gundlei*, 'facies amborum pallebant, ut languentes febribus'; the author of the *Vita Iltuti* describes his wife as 'veluti febricitans pallida' (c. 16).

was the eremitical life, after the example of Paul, the first hermit, and Saint Antony (44b). [The whole of this chapter is a series of plagiarisms from other Lives of saints].

(9) This [is the] first miracle [which was] wrought by the most righteous Cungar, through the divine clemency and through his sanctity and prayers; the marshy and reedy district round his settlement (*cultura*), which was then utterly useless, was transformed into fertile fields and rich pasture land. When this miracle became known, everybody throughout England and throughout Britain generally, magnified God's chosen servant Cungar, saying: [the author repeats what he has said in a couple of hexameters].

(10) One day, after this miracle, while the most revered Cungar was standing in the churchyard (*cimiterio*) surrounded by his clerks, he wished that a yew-tree might grow there, to provide shade from the summer heat, and, with its spreading branches, to ornament the churchyard. As he formed the wish, he fixed in the ground the staff (*baculus*) he was holding in his hands, which was made of yew. He left go of it, and, when he put his hand on it again, he could not pluck it out. Next day it began, in the sight of a crowd of bystanders, to bear leaves, and afterwards grew into a huge spreading tree, and fulfilled the most holy Cungar's prayer by giving shade from the hot sun to clerks and people in time of summer. [The author again summarizes the chapter in a pair of hexameters].

(11) When the news of these marvels became generally known, Inius (45), the most generous King of the English, generously and freely gave to the venerable Cungar all the territory lying round Cuggrisberia (46), and promised that its sanctuary (*refugium*) should be inviolate, and that, as long as he lived, the saint's prayers should never be disturbed by the noisy presence of the royal soldiers. The same king, after he gave the land, would never visit the place (47) thus marked out as to be honoured, lest he should in any way interrupt the honourable Cungar in his constant round of prayer, and in following ages other kings, his successors, never dared to visit or even to look at the venerable place. And those who did visit and gaze at it were immediately struck down by sickness, or did not live long after they had done so. [The author repeats the previous sentence in different words, in order to emphasize the statement].

(12) (48) Edgar, King of the English, while hunting one day in the forest, near the *locus* of the saint, approached it all unawares; he saw what he did not wish to behold, and after beholding it was grieved from his inmost heart, saying, 'Into Thy hands I commend my spirit: Thou has redeemed me' (49).

[W. here breaks off. H. continues as follows] :—

He did penance for unlawfully looking at the holy place, gave much land to God and S. Cungar, and asked all the clergy of the same territory to pray to the Lord that he might not suffer for his rashness and die before his time. He returned from his hunting

^{44b} cf. *Vita Gildae* (M. 107, 13), 'Jejunabat ut heremita Antonius; orabat vir religiosissimus cilicio indutus'; (our author has borrowed the last two words and inserted them in the first sentence of this chapter); and *Vita S. Iltuti* (c. 19, C.B.S., p. 174), 'sic Paulus et Antonius, primi heremite, fungebantur haustibus'. In the *Life of S. Nectan*, too, we read that 'it came into his mind to imitate Antony, the greatest of the hermits, and the other Egyptian fathers of godly living, by embracing the observance of the eremitical life'.

⁴⁵ Ina in H. ⁴⁶ Cungresbiria H. ⁴⁷ or, 'monastery' (*locus*).

⁴⁸ The heading of this chapter in W., *De obsecratione Edgari regis*, does not correctly describe its contents, and is probably the error of a scribe whose eye caught the heading of c. 16, which begins 'De obsecratione'.

⁴⁹ Ps. 31: 6.

full of forboding, entered the royal palace, was struck down by deadly languor, and died on the ninth day. This event still further increased the fear of violating the privilege of this place which many of the kings who were his predecessors had shown.

(13) The beloved of God, Cungar, then appointed twelve canons in that same oratory of his, to live there according to monastic rule and serve God (50) devoutly in the same temple in honour of the holy and undivided Trinity (51). This temple, originally woven with wattle (52), he had rebuilt in stone. Multitudes of sick persons came thither to S. Cungar from every quarter, to be healed by him of their diseases, and by the grace of God he healed them all, whatever their infirmities, after invoking the holy name of the Trinity. But the man of God finding that all this was keeping him from his beloved solitude and preventing him from being 'instant in prayer' (53), began to consider within himself how he might leave that place. He had heard that beyond the estuary of the Severn there were lonely places suitable for his purpose, and he determined to visit them, and, if they pleased him, serve God there more devotedly because more secretly. So he set out for the seashore, accompanied by his clerks and a company of people of both sexes, who were weeping at the thought of losing their father and faithful defender. The blessed Cungar, and certain of his clerks whom he retained with him, crossed over to the region of Glatmorcantia and safely landed in the port of the Tam (54). Finally he arrived at a steep hill (*ad arduum montem*), distant from the sea not less than a stadium. He ascended it and found there a copious spring, near which he built a *habitaaculum* and began to mark out a cemetery.

(14) The following night, however, while he was sleeping, he had a vision of an angel, who warned him to forsake at once the place he had fixed on and to proceed to another place destined for him by God. On awaking, he pondered over the vision, and, leaving the place he had begun to inhabit, went a little distance further on, till he came to a steep hill, which he saw at once was the spot fulfilling the angel's promise. [His reflexions are expressed in four hexameters]. He then proceeded to construct a building,

⁵⁰ *C. constituit duodecim canonicos, qui regulariter viverent et . . . deservirent* (he repeats the statement in c. 15). cf. *Vita Cadoci*, c. 45, 'Sanctus Cadocus constituit xxxvi canonicos, qui . . . regulariter servirent'. In the same way S. Tatheus 'in honore sancte et individue Trinitatis fundavit templum, in quo constituit duodecim canonicos' (*Vita Tatheii*, C.B.S., p. 258).

⁵¹ cf. the passage in c. 7, imitated, as we have seen, from a similar one in the *Vita Cadoci*, c. 5. Our author repeats the statement in chapters 14 and 15, and there are other instances of devotion to the Trinity in chapters 7 and 13. There are two references to churches built in honour of the Trinity in the *Vita Gildae*, three in the *Liber Landavensis* (pp. 80, 161, 162), one in the *Vita Tatheii* and one in the *Vita Iltuti* (which also contains three other references to the devotion to the Trinity). To represent Celtic saints dedicating churches to the Trinity is, of course, an anachronism, the fancy of Norman clerks. The practice spread on the Continent in the 9th century owing to the influence of S. Benedict of Aniane. He was at St. Denis from 827-829, and on 1 November, 832 the abbot, Hilduin, dedicated an altar there to the Trinity (apparently in the nave) and the Emperor Charles the Bald was buried behind it. In a charter he refers to the seven lights which burnt before it—'septem luminaria ante altare sancte Trinitatis, post quod nos, humanis solum legibus, sepeliri optamus'. In 835 there was an altar of the Trinity in the abbey of Notre Dame at Le Mans.

⁵² *Ex virgis et tabulis contextum*, cf. *Vita Gundlei*, c. 5 (C.B.S., p. 148) 'tabulis et virgis fundavit templum'.

⁵³ Rom. 12, 12.

⁵⁴ cf. *Vita Iltuti*, c. 25, 'pervenit ad Glatmorcantiam . . . ad ripam Tamii fluminis' (In H. Tamensi is by mistake printed *Camensi*).

measure out a cemetery, and finally to found an oratory in honour of the holy and undivided Trinity.

(15) (55) After he had decided to settle there, a ploughman of Poulentus, King of Glatmorcant, came one day to the place, and, when he found that the blessed Cungar had built a hermitage there without the king's permission, he said to him, with indignation, 'It is quite wrong for an unknown stranger to come and dwell on royal territory, without consulting my Lord King Poulentus. I will at once inform the King of this'. He did so, telling the king that a hermit called Cungar, who was a stranger, had settled in his fields (*agellis regiis*) without leave. King Poulentus blazed up when he heard this and hastened to view the place. Finding the report true, he became frantic with rage, abused the blessed man in furious language and bade him depart immediately. Cungar replied 'mildly' [in four hexameters], refusing to depart and praying that the king might be chastened from on high. His prayer was answered and the king immediately became blind, but, on his repentance for his insolence to the saint, from whom he asked, on his knees, for forgiveness and for his intercession, Cungar prayed for him and his sight was restored, so that he actually saw more clearly than he did before. After this miracle, King Poulentus gave the blessed Cungar all the territory around the place he had chosen, and the saint built a dwelling-place in which he served God devoutly and undisturbed. He built an oratory in the same place in honour of the holy and undivided Trinity [the writer forgets that he had stated that the saint had done this already], in which, as at Cungresbiria, he placed twelve canons to serve God according to a Rule. He himself, as a vigilant father, had the charge of both monasteries and frequently visited each in person.

(16) A certain prince named Pebian (56) desired to rob Saint Cungar, who also was called Doccuinus among the Welsh, because he taught (*docebat*) them the way of the Lord, desired, I say, to rob him of great part of the land, which, both by the gift of the king and by the attestation of the neighbours, belonged to his church. But the blessed Cungar, trusting in the testimony of his conscience, would not yield to this unjust exaction, and obtained that a fixed day should be appointed, on which, by the verdict of sure and faithful judges, drawn from the whole neighbourhood, the question of the ownership of the aforesaid piece of land might be settled. On the day appointed for the enquiry a multitude of neighbours came together, to decide as to the grant which had been made by King Poulentus, in whose jurisdiction the aforesaid piece of land lay. The prince named Pebian, accompanied by a great crowd of witnesses, tried his utmost to wrong the blessed Cungar in the matter, but, 'like wax melting in the heat of the fire' (57), he was melted away to nothing in the presence of all that were there. And all who saw it feared and glorified God, who had judged a just judgment and delivered the innocent from the hand of the mighty oppressor, bringing on his head the punishment he had deserved (58). And henceforward the blessed Cungar was honoured by all who had heard of his fame and his holiness, and was venerated by all, as an angel of God.

(17) (59) Now when the blessed Cungar saw that [the inhabitants of] both monasteries—that at Cungresbiri and the one he had founded in Wales—were walking in the

⁵⁵ The heading of this chapter (see p. 37) is imitated from the headings of c. 20 and c. 65 in the *Vita Cadoci*.

⁵⁶ The heading in W. has, more correctly, *Pebiau*.

⁵⁷ Ps. 68, 2, see *Vita Cadoci*, c. 39.

⁵⁸ Ps. 34, 10 (not Vulg.), 2 Chron. 6, 23, Vulg.

⁵⁹ In H. c. 16 and c. 17 are united to make a single chapter.

SAINT CONGAR

fear of the Lord and bringing forth good fruit, there came into his mind a counsel inspired from on high, which was that he should visit the church (*limina*) of the most blessed Peter and Paul and implore their prayers that he might find mercy with God, and afterwards also visit Jerusalem and kiss the sacred places in which the Lord's feet stood (60). So, having received licence to do this from Dubricius, Bishop of Llandaff (61), with his blessing, and also permission from the monasteries under his care and from the parishioners of the neighbouring churches, he began his projected journey. He visited with devotion the most holy church of the Apostles at Rome and implored the intercession of the innumerable other saints who sleep there, and then set out for Jerusalem, and after he had visited the holy places in that city he received the reward won by his merits here and was translated to the heavenly realms. His companions brought him back thence to Congresbiria, as the tradition we have received from those who have gone before us declares, through the grace of our Lord Jesus Christ, to Whom be honour and glory for ever and ever.

(To be completed in the June number)

⁶⁰ Ps. 132, 7 (Vulg.)

⁶¹ cf. *Vita Tatheï* (C.B.S. p. 258) 'licentia Landavensis episcopi'.

Notes and News

EXCAVATIONS AT MASKI

IN ANTIQUITY, June 1944, there is a note by Stuart Piggott on a cylinder seal discovered at Maski, Hyderabad State, Deccan. Mr Piggott is, I feel, not fully in the picture with regards to Maski and the excavations which have been carried out there. The excavations covered by the Reports for 1935-6 and 1936-7 were far from extensive, and these reports, unsatisfactory though they may be, are by no means interim but final. Other excavations have been conducted in 1943, and it is possible that better results from these excavations may now be produced as amplifying and completing the earlier efforts. These earlier excavations have been dealt with fully and faithfully by us in our article 'The Cultures of Maski and Madhavpur', published in the Journal of the Royal Asiatic Society of Bengal, vol. IX, 1943, which was the result of our investigations of these sites in December 1940 and December 1941.

Briefly, our findings were that the terracottas, beads and seals (with the exception of that under discussion) all pointed to occupation dates of 2nd century B.C. to 2nd century A.D. The beads in particular are very characteristic of this period; carnelian and agate plain beads and etched carnelians having identical patterns with those found at Sahri Bahlol and Taxila, and bone beads with dotted circle patterns also common at these sites of the early historic period. Pottery showed that the painted types were mostly Mauryan, though the earliest types might be 4th century B.C., these were followed by polished black ware, shown by no less than six sites in Northern India to date from late 3rd century-early 2nd century B.C., and these again by brown and black burial pottery of 2nd-1st century B.C. and decorated red wares of 1st century B.C.-2nd century A.D. In spite of the chert and chalcedony flakes, it is considered unlikely that this site could have been occupied earlier than the 5th, or at the outside the 6th century B.C.

The excavations of 1943, judging by the photographs which have most kindly been made available to me, have been conducted with far more care than their predecessors. It remains to be seen whether the recording is on the same level as the knife and brush work. The new work has uncovered a cemetery of two periods, the earlier period being remarkable for the presence of cylindrical and dish-shaped terracotta coffins. It is however as likely that these have Achaemenid or Parthian associations as any other earlier ones, if Middle Eastern contacts are to be presumed. A unique style of bead has been found in these new excavations with exact parallels from Sahri Bahlol, this being a bead of black vitreous paste having a raised white spiral circling it from end to end. This is yet another example of material from the early historic period.

We have emphasized that it is increasingly more obvious that microliths in general, and the ribbon flake implement in particular, existed in many parts of India well into the Christian era. On the present evidence the cylinder seal would appear to be late rather than early. Its Indian design and slightly tapering bead-shaped aspect make it possible that it was produced as a late and local experiment. Except that we have in the upper layer of burials a grouping of jars and pots comparable with late burials at Harappa, there do not appear to be any clear connexions with the cultures of the Indus Valley.

NOTES AND NEWS

Admittedly, stone flakes and painted pottery occur in both localities, but they show little if any real resemblance; furthermore it would be exceedingly rash at this stage to call the Maski Culture, chalcolithic. It is more than likely that at Maski stone artifacts co-existed with those of iron and were produced in the three or four centuries immediately preceding the Christian era.

M. E. and D. H. GORDON.

ARENE CANDIDE

The Ligurian cave of Arene Candide is celebrated as a site from which a miscellaneous collection of neolithic and palaeolithic relics was excavated in the last century. In the early years of the war Signor L. Bernabo Brea conducted fresh excavations. Taken prisoner in our invasion of Sicily, he described his important results to Lieut. R. B. K. Stevenson (Keeper of the National Museum of Scottish Antiquities) who sends the following summary of the stratification:—

- | Metres from top
of deposit | |
|-------------------------------|---|
| (1) 10 -5.30 | 'Upper Aurignacian' including the ceremonial burial of a warrior. |
| (2) 5.30-3.80 | Sauveterrian, microlithic with very rare <i>micro-burins</i> , burials. |
| (3) 3.50-3.10 | Polished stone axes, obsidian and flint implements, <i>Cardium</i> shells, dark-faced pottery adorned with finger-nail, punctured, shell-edge and other serrated impressions and some with plastic ribs bearing finger-tip imprints—to be compared with the Stentinello ware of Sicily. Some forms persist into |
| (4) 3.10-2.15 | 'Danubian II' forms—socketed ladles, <i>pintaderas</i> , one sherd with spirals recalling Butmir, pots adorned with hatched triangles engraved after firing, quadrilobate square-mouthed vessels, a figurine having the hair, skull and face modelled separately as at Sesklo. |
| (5) 2.15-1.75 | 'Western Neolithic' pottery including baggy pots with lugs, sherds with wart decoration, carinated bowls, pan-flute handles as in the Lagozzian of the Lombard lakes. ? Compare the Cortaillod culture of Swiss lakes. |
| (6) 1.75-1.10 | Similar types but with sharp-elbowed strap handles and <i>anse ad ascia</i> , comparable to <i>terremare</i> wares. |
| (7) 1.10-.080 | Rough wares with Golasecca and Hallstatt shapes, but polished axes and flint implements still occur. |
| (8) | Roof-fall with Roman and medieval sherds among débris. |

An account of older excavations at Arene Candide will be found in Peet, *The Stone and Bronze Ages in Italy and Sicily*. Some of the pottery is illustrated in Childe, *Dawn of European Civilization*, 1925 edition.

Reviews

LARISA AM HERMOS, II, DIE ARCHITEKTONISCHEN TERRAKOTTEN.

By LENNART KJELLBERG, edited by ÅKE ÅKESTRÖM. *Stockholm: Kungl. Viterhets Historie och Antikvitets Akademien*, 1940. pp. 174, with 51 text-figures, and portfolio of 72 plates (14 in colour). 45 kr.

This is a salutary book. Its learning is up to date but its outlook is essentially that of forty years ago, and an excellent case is made for returning to some of the ideas then prevalent. An old man, trained in the Furtwängler epoch, here considers the theories of the next generation and rejects them. For the book, though incomplete at Kjellberg's death, appears as nearly as possible in the form in which its author left it, at the age of 77. It has been revised by two successive editors, his son Ernst, who also died before it was ready for press, and Åke Åkeström; but each took care not to impose his personality upon it.

In 1902, when Kjellberg excavated the first of these architectural terracottas at Larisa, classical archaeology had accepted a dogma that Ionia was the cradle of Greek art. The testimony of the ancient historians supported that conclusion, which was based archaeologically upon the evidence that Ionia—or, to be scrupulous, the Eastern Aegean in general—had first developed an orientalising style in vase-painting and then imposed it upon the backward Greeks of the homeland. A comparable influence, it was deduced, had been exerted in sculpture, more than a century later, when Greece itself was dazzled by Ionian masterpieces introduced by the tyrants. In the series of archaic statues found on the acropolis at Athens, the experts believed they could watch the local sculptors turning from their own crude style to imitate, more and more successfully, the accomplished work imported from Ionia. The only weakness in the theory was the unfortunate fact that nothing really comparable had been found in Ionia.

Such was Kjellberg's outlook when he began to excavate at Larisa, a site near Smyrna which, if not strictly in Ionia, lay nearer to the Ionian cities than to most of the others inhabited by Aeolians. He was rewarded, in 1902 and again in 1932, by finding terracotta reliefs mainly of the sixth century B.C., which are unmistakably in the pictorial tradition of Asia Minor, yet equally resemble terracottas from Etruria, and have practically nothing in common with the statues of Athens, though almost as competent. Here at last, was firm evidence from which to study the reality of Ionian sculpture and its influence. In this book Kjellberg does not only give a meticulous and superbly illustrated publication of the finds, he also takes the opportunity to compare them with the material from the rest of the Greek world and deduces general conclusions.

In the thirty-year interval between Kjellberg's two sets of discoveries at Larisa, excavation of early Greek sites was almost confined to Greece proper. With attention inevitably concentrated on new finds, younger archaeologists reacted against Pan-Ionism and ascribed to the Greek mainland an ever larger share in the formation of archaic art. To Corinth, for example, was now credited the innovation of decorating wooden temples with terracotta reliefs (on gutter and roof) such as those from Larisa. Kjellberg, however, gives what seem to me convincing reasons, in the light of our present imperfect knowledge, for an origin in North Ionia, probably in the seventh century. He attributes to the same region the evolution of certain widely used patterns, and argues that the rosette is another instance of Mycenaean survivals there. He even finds plausible grounds for tracing the foundation and development of Greek colour-sense to N. Ionia,

recalling the Thasian origin of the great painter, Polygnotus, to show that he inherited the tradition of the painted terracotta friezes of Larisa. The use of a black silhouette around coloured figures of animals is common to the terracottas, to Eastern Greek vases and to Clazomenian sarcophagi, and Kjellberg believes that the vase-painters were inspired by reliefs both in this matter of technique and in the choice of subjects. Ultimately, however, the subjects were largely imitated from Assyrian prototypes, which are faithfully reproduced in some minor details, as he clearly demonstrates. This raises an interesting point which he does not mention; the accepted dating of the Larisa friezes is about fifty years later than the fall of Assyria, so that either Ionian art was very conservative or else the direct influence came from one of the succession states, presumably Media, since the style is not Babylonian.

Future discoveries may disprove some of Kjellberg's views as to the priority of N. Ionia in shaping Greek art, though I should be surprised if others were not confirmed. And I believe he is right in ascribing to N. Ionia a predominant share in the rise of Etruscan art through the export trade of Phocaea. At Larisa, as in Etruria, the terracottas composed the entire sculptural decoration of wooden temples; he found scraps of pedimental statues in addition to the continuous bands of figures in relief and the usual architectural ornament, and the style of the reliefs is virtually identical with the contemporary Etruscan. When a companion volume of the Larisa report is published, dealing with the temple of the early fifth century, we shall probably be given further evidence of a strictly architectural nature corroborating Kjellberg's conclusion.

A. W. LAWRENCE

ITALIC TOMB-GROUPS IN THE UNIVERSITY MUSEUM, PHILADELPHIA.

By EDITH HALL DOHAN. *University of Pennsylvania Press. London: Oxford University Press, 1942. pp. xii, 114, 55 plates, 69 figs. 45s 6d.*

The tombs whose contents are described in this impressive volume were excavated at Narce (unhappily mis-spelt on the frontispiece), Vulci and Pitigliano in Central Italy in 1895-96. Judged by modern standards the manner of their excavation and their subsequent history were unfortunate. They were excavated by Italian speculators, from whom their contents were acquired for the Princeton University Museum by Professor Arthur L. Frothingham. The finds were stored and photographed in Italy, taken to America in instalments, unpacked in 1897, and then stored again till Frothingham was able to make an inventory. Unfortunately for the editor of this volume, the objects listed in the inventory did not always coincide with those illustrated in the photographs, and the search for missing articles—generally successful—in one instance led as far as California.

That the editor has been able to make such a useful and scholarly publication from material whose origin was so unpromising is proof of her patience, knowledge, and skill. In essence, the volume is a catalogue of the contents of the tombs. The three places are treated separately, but inside the geographical grouping, the tombs are listed chronologically (it was an unhappy idea to follow Frothingham's outworn numbering). An introduction gives a history of the collection; and describes the types of the tombs and the technique of the pottery found in them. The research that has made possible the correct assignment of these objects to the tombs of their origin, the photographs and the verbal descriptions, have brought into the stream of Etruscan studies a body of material that might easily have been lost; but the work is transformed from a mere catalogue into an archaeological compendium of great usefulness by the lists of *comparanda* which the editor appends to her descriptions. The objects are not in themselves spectacular or of

high artistic merit, but they are given a value beyond their intrinsic worth by Dr Dohan's skilful comparison with vases scattered far and wide over Europe and the Mediterranean. The result is, in effect, a series of suggestions for a comparative study of Etruscan tombs of the 7th century B.C.

The chronology of the tombs is discussed in a final chapter. Dr Dohan distinguishes three groups among them : (1) one showing affinities with the ' Warrior's Tomb ' at Tarquinii, which she dates about 680 B.C. ; (2) the second to be connected with the ' Boccharis Tomb ', which she puts a decade later ; (3) the third, dated by Proto-Corinthian and Corinthian imports to about 625 B.C. Though this chronological chapter admits of discussion and even of differences of opinion, its value for Etruscan studies is great.

The book is altogether a scholarly work, and to those in Britain who have grown used to war-time standards of production, it is a pleasure to handle. R. C. CARRINGTON

HANDBOOK OF IRISH FOLKLORE. By SEAN Ó SUILLEABHAIN. *Educational Company of Ireland*, 1942. pp. xxxii, 699, 1 plate. Price not stated.

Folklore is in some degree the spiritual counterpart of archaeology, for it may preserve certain practices and beliefs which may throw light on some archaeological discoveries which would otherwise be difficult to explain. This, apart from its intrinsic interest, is its chief claim to attention by archaeologists. Moreover it is probably true to say that no country in Europe offers so rich a field for the study of folklore as does Ireland—a country whose people are descended from Celtic and especially pre-Celtic stocks that were closely akin to the prehistoric races of Britain. In studying Irish folklore, therefore, one may feel able to recapture the spirit that once animated the dry bones revealed by archaeology in our own country.

The title of this book is perhaps a little misleading, for it is not a handbook in the ordinary sense of the word, and anyone who hoped to find it a storehouse of information about Irish folklore would be disappointed. Actually it is a handbook or guide for collectors of Irish oral tradition, and consists of an outline of the various points about which collectors should make enquiries in order that the resultant collections may be as complete as possible. Thus the (nearly) 700 pages of the book are almost entirely filled with questions for which the collector should seek answers ; many of them are leading questions embodying material which has already been recorded from oral sources in Ireland, and this in itself forms an extensive, if sketchy, collection, revealing the essentially pagan character of rural Irish life.

The classification is thorough and systematic, covering every aspect of human life from the cradle to the grave. Among the subjects considered are :—settlement and dwelling, agriculture, trades, marriage, death and other phases of human life, folk-medicine, festivals, popular belief and practice, divination, magicians, talismans, witches, fairies, mythological traditions, historical traditions, popular oral literature, and sports and pastimes. One awaits with some impatience the publication of the results obtained by the collectors along these lines.

I cannot resist quoting some of the folk-remedies that are mentioned. Baldness : rub oil produced by burying a live eel in a dunghill. Burns : the spittle of of a person who has licked a lizard when young. Cuts : remedies include corpse-water, urine and cobwebs. Fits : pass sufferer nine times under a donkey. Foul breath : follow directions given by a posthumous child. Headache : snuff left over after a wake. Heart-ache : ' priests do not wish to cure it '. Jaundice : the patient drinks thrice at

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a well to which he has been led on a bridle by a person whose parents had the same surname before marriage. Mumps : lead patient with ass-halter three times round a pig-sty. Toothache : prevented by not shaving on Friday.

The above list would, however, give quite a false impression of Irish-folk-remedies as a whole, being selected for their quaintness. Other remedies consist of the use of herbs and charms, and various means of banishing the evil spirit that is conceived to be causing the trouble. Modern medicine is, indeed, foreshadowed by the use of foxglove for heart trouble, by bathing in a sweat-house for rheumatism, and by the prescription of a sea-voyage for lassitude.

The author, who is Archivist to the Irish Folklore Commission, was trained under Dr Aake Campbell at the University of Uppsala in Sweden. He is to be congratulated on the thoroughness of this work, and it is to be hoped that it will produce the results that it deserves.

E. CECIL CURWEN

ARCHAEOLOGICAL EXPLORATIONS IN THE CORDILLERA VILCABAMBA IN SOUTH EASTERN PERU. By PAUL FEJOS, with two appendices by JOHN H. ROWE. Viking Fund Publications in Anthropology, No. 3, New York, 1944. pp. 65, 80 plates, 18 text figures, bibliography. \$3.50

The Cordillera Vilcabamba has been noted since 1912 as the scene of Bingham's great discovery of the late Inca City of Macchu Picchu. Bingham himself knew of the existence of other sites in the neighbourhood, but with one exception he was not able to explore them intensively, though he did make investigations, hardly less important than those at Macchu Picchu itself, of Inca roads leading to it. The present work helps to place the town in its proper perspective, not as a remote stronghold, but as the centre of a thickly populated and extensively cultivated region.

The explorations described in this volume were in a sense a by-product of the Wenner Gren Scientific Expedition to Hispanic America 1940-42. The main object of the expedition was ethnological research, and only by chance was its attention directed to the archaeological sites described. It did not include a professional archaeologist, so work was confined mainly to clearing the sites of undergrowth and soil, and then surveying and photographing them, besides mapping the area in which they lie. Excavation was not attempted, except for tests which were made on two sites by Mr John H. Rowe during brief visits. It is unlikely, however, that much will be added to our knowledge by intensive excavations on the sites explored, since everything points to their being of late Inca age, like Macchu Picchu which was so fully investigated by Bingham.

This is not to say that the work was in any sense insignificant. No one who has been to Macchu Picchu, or even seen photographs of it, will minimise the work of surveying or of clearing the undergrowth in that region of stupendous relief, and the expedition employed up to 900 men at a time in the task.

Each site comprises a selection of the ingredients of Macchu Picchu combined in varying proportions,—houses, baths, shrines, staircases and the ubiquitous terraces,—according to the nature of the settlement. The photographs give a good idea of the grandeur of these sites, among which the great range of terraces at Inty-Pata is a particular delight to the eye.

The production of this volume reaches the high standard which is claimed for the series, but the general map of the region would have been improved by the use of a second colour for the contours, preferably the brown which is, with less necessity, used on the title page.

G. H. S. BUSHNELL

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NAVAHO HUMOUR. By W. W. HILL. [General Series in Archaeology No. 9; Leslie Spier, Editor]. *George Banta Publishing Company, Agent, Menasha, Wisconsin, U.S.A.*

This is a multigraphed publication of 28 pages. It will be of interest to those archaeologists who have not forgotten that the makers of the things in their museums were human beings not unlike themselves. The author concludes that there is a fundamental unity between Navaho and European humour, though it finds different ways of expressing itself. After reading the carefully recorded stories here collected one agrees, but with the proviso that Navaho humour is mostly of the schoolboy type. Natural functions play a large part in it. But we can all laugh at the story of the coyote chasing a rabbit and, falling over and over in a hole just as he was catching it up, resumed the chase in the opposite direction. And the one about the slightly deaf man who, asked if he had ever seen a white horse, replied, 'Yes, I once saw one naked' is quite good. We also like the story of the earnest school teacher who unwittingly brought down the house every time she sang a Navaho song whose words she did not understand. It was not a nice song.

Institutionalized humour may seem strange to us whose institutions have mostly become fossilized; but it was a reality in medieval times, as witness the boy bishops and Cornish plays. It is amusing to realize that Stonehenge may have been the scene of clowning as well as of solemnity, and we would commend this idea to the cranks. We suspect that the Beaker-folk might have appreciated some of the Navaho stories better than some of the books written about their own religious ideas. Some first-hand acquaintance with primitive peoples and their way of life is a fine corrective of abstruse theorizing. O.G.S.C.

EXCAVATIONS AT TAJUMULCO, GUATEMALA. By BERTHA P. DUTTON and HULDA R. HOBBS. Monographs of the School of American Research No. 9. *University of New Mexico Press, Santa Fé, 1943. pp. XII, 121. 3 plates, 101 text-figs., 6 maps.*

After a reconnaissance of the Dept. of San Marcos in the western highlands of Guatemala in 1937, the authors decided that a site near the village of Tajumulco, not far from the Mexican border, was sufficiently representative to be worth excavating. The result was the expedition described in this report, which occupied three months from December 1938 to March 1939.

The site comprises three large pyramidal mounds, with a number of smaller ones and miscellaneous structures. The site was cleared and the largest pyramid excavated, also much of a large plaza between it and a second large mound. Although the authors came to the conclusion that the site dated, in the main, from the Mexican period, not before A.D. 1000 at the earliest, it appeared that the pyramid excavated had reached its final dimensions in at least three stages. It was comparatively roughly constructed, with no wall plastering. A number of stone-lined tombs were found, covered with flag stones, and these were generally sited at the foot of a stairway. Owing to the dampness of the site, the skeletal remains were in an extremely bad condition; they are described in an appendix.

Some stone sculptures were found, most of which are in such a bad state that little can be made of the illustrations. The authors see in them a local style with Mayan and Mexican influences. There is an assortment of smaller objects, including a little metal, namely some small bells of very pure copper and a single gold ornament. The copper forms the subject of an appendix, and it is considered that its origin is somewhere in the neighbourhood.

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Perhaps the most interesting feature of the whole excavation was the high proportion of plumbate ware among the pottery, comprising over half the complete vessels. A considerable proportion of the report is devoted to consideration of this, and attention is called to the fact the name is due to its appearance and not to any lead content. The essential characteristics of this ware are its high degree of hardness and metallic lustre, which distinguish it from the associated ware described as quasi-plumbate, though there does not appear to be any real difference in origin between the two. It is understood that a fuller analysis of this ware is yet to come. Plumbate ware is held to show strong connexions with the Totonac area of the Bay of Campeche, where it perhaps originated, but certain effigy vases representing the god Tlaloc show Toltec influence also. A small quantity of orange ware which is present points in the same direction.

This is a careful piece of work, well produced, which throws light on an area which has been little studied. The illustrations are excellent, except in the case of those stone objects whose condition precludes a clear representation of detail, but map no. 1, of the Department of S. Marcos, could very well have been redrawn. Appendix III is the contract between the School of American Research and the Guatemalan Government, and contains a significant clause prescribing that a local museum shall retain all the objects found, except the lesser duplicates of little worth and importance. This seems excessively harsh, and we trust that the museum in question has proper facilities for the care and exhibition of the specimens it acquires.

G. H. S. BUSHNELL

1. AN ARCHAEOLOGICAL SURVEY OF VENEZUELA. By CORNELIUS OSGOOD and GEORGE D. HOWARD.
2. EXCAVATIONS AT RONQUIN, VENEZUELA. By G. D. HOWARD.
3. EXCAVATIONS AT TOROCON, VENEZUELA. By C. OSGOOD.
Yale University Press, \$3.50. (Milford).*

The Institute of Andean Research continues the publication of the results of its projects in Latin America, of which no. 3 has already been noticed in this journal. The present series deals with Venezuela, where systematic study is long overdue, as is clearly shown by the Survey.

The Survey occupies the first place in the volume. The journeys on which it is based were carried out in a brief two months in the summer of 1941, and were intended chiefly as pointers to future work. An account of the results is combined with a summary of all previous publications, which cannot fail to be of great value to future workers, though it would be easier to follow if some attempt had been made to arrange the States, which form the headings, in some kind of geographical sequence instead of in alphabetical order. Except for the Lake Valencia area in the north, information is scrappy in the extreme, and the authors were only able, in the time at their disposal, to make exploratory excavations at selected sites. For the site of Los Tamarindos, near L. Valencia, Dr Alfred Kidder II generously allowed a summary of his unpublished work to be presented. This site provided one of the few indications of stratification so far discovered.

Having considered all the evidence, the authors distinguish three main focal centres, typified by (a) Barrancas, near the mouth of the Orinoco; (b) L. Valencia, already

*Yale University Publications in Anthropology, Nos. 27, 28, 29. (Projects 5d, 5a and 5b of the Institute of Andean Research).

1. pp. 145, 15 plates, 27 text figures, bibliography.
2. pp. 84, 7 plates, 11 text figures, bibliography.
3. pp. 65, 16 plates, 16 text figures, bibliography.

mentioned; (c) the Quibor area in the State of Lara, besides three minor ones, which await confirmation from future work. Barrancas shows affinities with the Erin Bay site in Trinidad, where further work is planned. In this connexion, British archaeologists have every reason to be grateful for the contributions which their American colleagues are making to the knowledge of the West Indies, but there is much to be done, and if they would turn their attention in that direction, collaboration should ensue which would be valuable from many points of view.

At the conclusion of the Survey, Dr Howard proceeded to the Parmana area on the Orinoco in the State of Guarico, where he excavated a site at Ronquín, and tested others. An account of this work forms the subject of the second paper. Two cultures are distinguished, marked by a change in the predominant pottery type but not in the mode of life. It seems that there was a slight overlap in time between them. Analogies with neighbouring areas are pointed out, and in particular it appears that the late Ronquín culture is represented over a wide area in the Orinoco basin, besides being related to the late culture of Lake Valencia, while the early culture is related to that of Barrancas, already mentioned, and may have affinities with Trinidad.

The third paper is an account by Dr Osgood of the excavation of a mound near L. Valencia, which he did in 1933, but did not publish at the time. He compares his results with the work of Bennett and others in the same area, and finds that the mounds may have served various purposes. Some, including his own at Torocón, may have been burial mounds which were subsequently lived on and others, like Bennett's at La Mata, may have first been built up as dwelling places and afterwards used for burials. Lake Valencia is receding and must have covered the entire area until comparatively recent times, and Bennett considers that the earliest deposits at La Mata were formed beneath pile dwellings in the lake. Apart from some atypical ware in the lowest levels of the Torocón mound, the material seems pretty homogeneous but there is evidence of increasing stylization, which is best seen in the peculiar female figurines with 'laterally extended canoe-shaped heads'. No particularly close relationships with other areas were made out, but trade sherds show probable intercourse with the area near the mouth of the Orinoco.

The Ronquín and Torocón papers form a contrast in presentation, which calls for comment. Osgood's paper is interesting and reads easily, but Howard's makes hard reading and it is sometimes difficult to form a clear picture of the objects he is describing. The cause of the trouble seems to be a method of archaeological classification formulated by Osgood, involving a lot of complicated terms, which may be a good servant, but it is to be feared that it is a bad master. Osgood himself in his paper keeps it in its proper place, but it appears to have dominated some of his pupils, of whom we infer that Howard is one. He describes his method, in this case, as a 'mediate conceptual approach', and while we are still wondering what it is all about, he tells us that the first stage in classifying Ronquín artifacts was to group them 'on the basis of mediate perception according to the nature of their physical material'. The result of this grandiose procedure was to divide them into clay, stone and lignite! This is like shooting down sparrows with a six-inch gun. Then there is a witch-word for the characteristics of an object, namely the 'mode'. However full the description of a type of object, a list of these modes is given at the end, thus causing much repetition and not a few statements of the obvious. A single example must suffice. After a description of a spindle whorl shaped like a truncated cone, we find 'The diagnostic modes are: shape of spindle whorl and truncated conical shape'. Presumably the first of these is equally 'diagnostic' of a flat whorl! After the descriptions, the numbers of the various types of object are listed

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by excavation levels, a perfectly sound procedure, but the tables are inordinately swollen by the inclusion in many cases of each mode also, so that we are confronted by a mass of figures which have very little meaning. The tendency in this paper is to lose the human side of archaeology in excessive mathematics and classification. G. H. S. BUSHNELL

University of Denver, Department of Anthropology. Anthropological Series. Second Paper—NASAL INDEX OF THE PREHISTORIC PUEBLO INDIANS, and Third Paper—NASAL INDEX OF THE BASKET MAKERS. By E. B. RENAUD, Professor of Anthropology.

The artificial deformity of the majority of prehistoric Pueblo skulls renders their cranial measurements very unreliable as criteria of racial classification. To make good the deficiency Professor Renaud has provided a study of the nasal index in 12 series of skulls from Colorado, New Mexico, and Arizona, amounting to 292 males and 300 females. The main difference found was the higher percentage of leptorrhine noses in Arizona, with a greater frequency of platyrrhine noses in New Mexico, and hyper platyrrhine noses in Colorado. Women, consistently, had shorter and broader noses than the men of the same region (in only five out of the twelve series, however, can the samples be regarded as large enough for an effective comparison). Renaud suggests that the broader nosed type is more representative of an older and surviving strain and is a particularly important factor in the physical make-up of the female population.

In the third paper of the series, Renaud analyses the nasal index of the Basket Makers, who preceded the prehistoric Pueblos in the southwest, and considers other extant Amerindian series from North America, Old Mexico, and South America in a similar connexion.

On the basis of a grand total of 584 skulls he finds a slow but progressive decrease in the mean nasal index of the separate groups and the regions considered as one moves from northeast to southwest in North America. Again, in South America, the index drops from 52.34 for the northwest to 47.31 for the south, and 46.39 for the east. Renaud finds no essential difference throughout the continent, but a gradual shading from group to group. In practically all the series the females had on the whole shorter and broader noses than the males.

The data suffer again, though unavoidably, from the small size of some of the series, but have the advantage, as the author claims, of presenting the nasal index of the Basket Makers and of similar types of Indians in a systematic fashion, and of bringing together information otherwise scattered in the anthropological literature in several languages.

K. L. LITTLE

ARCHAEOLOGICAL STUDIES IN PERU, 1941-1942. By W. DUNCAN STRONG, Professor of Anthropology, Columbia University, Director of the Ethnogeographic Board, National Research Council, and GORDON R. WILLEY, Instructor in Anthropology, Columbia University, and JOHN M. CORBETT. *Columbia Studies in Archaeology and Ethnology*, vol. 1. *Columbia University Press, New York; Humphrey Milford, London.* pp. 230, 21 plates, tables, etc. 25s.

This volume was published for the Institute of Andean Research, and is one of ten projects in Latin America sponsored by the Coordinator of Inter-American Affairs, which implies that they enjoy Government support. The policy in general is to publish the results of these projects as numbers in existing University or Museum series, e.g. the Yale University Publications in Anthropology, or the Papers of the Peabody Museum at Harvard, which indicates that these institutions have entire technical control of the

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work. This will give food for thought to British archaeologists,* and not least to those who were present at the lively discussions on Archaeology and the State at the Congress held last August at the London Institute of Archaeology.

The present work is divided into four parts, which will be noticed individually below, and it is to some extent an interim report since some of the material is not yet available for study, but it is unlikely that fuller investigation will alter the conclusions set forth here in any important particular.

Our knowledge of the archaeology of the Peruvian coast depends very largely on the great work of Dr Max Uhle, done round about the beginning of the century, and in general it can be said that these studies prove its essential soundness; but it contains certain obscurities, due partly to the difficulty of his style and partly to his reluctance to publish his results, so that much of his work had to be prepared for publication by others, from his collections and field notes, after a lapse of many years. The excavations described in this volume were done at or near some of his critical sites, in order to increase the evidence available and to clear up some of the outstanding difficulties.

Part 1. *Archaeological Notes on the Central Coast.* By WILLIAM DUNCAN STRONG and GORDON R. WILLEY.

Summaries are given of two brief reconnaissance trips covering the central part of the coast from Patavilca (approx. 11° S.) to the Ica valley (approx. 15° S.). During the southern trip, the site of a recent discovery of an extension of the two striking cultures of Paracas was visited, between the Ica and Nazca valleys. These were originally discovered by Dr J. C. Tello on the barren peninsula of Paracas (approx. 14° S.) some years ago; they have not been yet properly published, but they are considered to be older than the well-known culture of Nazca, and no one who has seen the exhibit in the National Museum at Lima will deny their importance. It is hoped that Dr Tello will publish an adequate account of them as part of Project 8 in the present series. The record of their occurrence near the Nazca valley is one of the most important things in this volume, and it is followed by a brief but intensely interesting discussion of the possible relationships between them and other early cultures of Peru.

This section also includes a description of trial excavations near Uhle's sites in the shell mounds near Supe and at Ancon. His results were confirmed, but little was added except the discovery of some foundations of buildings at Supe. The impression that they are the earliest remains known in this area was strengthened but no positive stratigraphical evidence was found.

Part 2.—*A Ceramic Sequence of Pachacamac.* By WILLIAM DUNCAN STRONG and JOHN M. CORBETT.

A trial excavation in and below a midden of the Inca period east of the Sun Temple confirmed Uhle's sequence, and emphasized the importance of the Interlocking style of pottery, which was described by Kroeber from Uhle's collections in the Chancay valley. Associated with it are sherds of a hitherto unknown negative style, which may prove useful in correlation with pottery of similar technique further north. The resemblance to the negative style of Recuay is not particularly close, but other types of negative painting may easily turn up in the northern part of the Peruvian Andes, since this form of decoration is quite common in Ecuador. Traces were also found of an early White-on-Red style, better known from the Chancay valley.

* It is not so much 'food for thought' we need, or examples from other countries, as the means to translate our 'thoughts' into actions.—O.G.S.C.

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Part 3.—*Excavations in the Chancay Valley.* By GORDON R. WILLEY.

As a result of grave excavations at the Cerro de Trinidad in this valley, Uhle considered that the White-on-Red style of pottery succeeded the Interlocking style, but the evidence was not really conclusive. Trial excavations are described here, which show conclusively that the White-on-Red style is the earliest to appear on the sites studied, though it persisted after the arrival of the Interlocking. Sherds painted in a negative style, similar to those from Pachacamac, were found associated with the White-on-Red style.

These excavations, together with previous work, enabled the author to set out among his conclusions a table showing the general culture sequence in Central Peru.

Part 4.—*A Supplement to the Pottery Sequence at Ancon.* By GORDON R. WILLEY

In describing Uhle's excavations at the Necropolis at Ancon, Strong divided a continuous sequence into Middle Ancon I and II and Late Ancon I and II. In the present study a number of graves were excavated in an area which was carefully chosen with the object of strengthening the weakest link in the chain, Late Ancon I. Strong originally classified his material by means of mathematical analysis of traits; for purposes of comparison the author has followed the same system, while expressing a shadow of doubt as to its applicability to the type of data treated, but fortunately what he describes as a 'trait by trait consideration' substantiates the result, namely that the new collection falls logically into position between Middle Ancon II and Late Ancon I.

This book is primarily for specialists in South American archaeology, and it should be in all reference libraries which attempt to deal with the subject. The plans and sections are clear, and drawn true to scale. The pottery is illustrated by drawings and photographs reproduced in half-tone, which are good of their kind, but the authors of part 2 themselves have pointed out, in connexion with the Interlocking style, that a photograph tends to obscure the pattern while a drawing over-emphasizes it. The difficulty and cost of producing coloured illustrations are fully realized, but the inclusion of even a single coloured plate giving specimens of the Interlocking, Negative and White-on-Red styles would be of incalculable value to those who have not got access to the original material, and it is hoped that the authors will consider this when producing their final reports.

G. H. S. BUSHNELL

NO LIMITS BUT THE SKY: The Journal of an Archaeologist's wife in Peru. By MARY B. KIDDER. *Harvard University Press; Humphrey Milford, London.* pp. 224, 15 plates. 16s 6d.

What are the ingredients of the ideal archaeologist's wife? Opinions will differ, but most readers of this book will agree that Mrs Kidder combines a good many of them. She accompanies her husband on his expeditions into remote places, keeps house for him in most uncomfortable surroundings, mends his pottery, helps with his notes, and does not, we infer, set out to be an archaeologist herself!

Dr Alfred Kidder, junr. is a Harvard don, son of the well-known archaeologist, and this book consists of his wife's diaries of two expeditions to Peru which she shared with him. The first, which took place in 1937, was a kind of reconnaissance in which her husband visited as many sites as possible with a view to a course of lectures at Harvard. The second, in 1939, involved a stay of 6 months at Pucara, in the Titicaca Basin, in order to excavate an important pre-Inca site, whose culture has many affinities with that of Tiahuanaco, but is nevertheless distinct from it.

The first trip did not take them far off what can almost be described as the beaten track, but it makes a pleasant story, which will appeal to lovers of travel books, and cannot fail to give pleasure to wanderers in Peru who find their own experiences vividly recalled. They saw the best-known sites around Lima and Trujillo on the coast, climbed up to Bolivia for a fleeting visit to La Paz and Tiahuanaco, and then went to Cuzco, where they saw the notable things that an archaeologist makes it his business to see in the neighbourhood and a good deal else besides.

The second visit was a more serious business, which involved living at a height of about 13,000 ft. in a bare and rather comfortless building which was christened 'Harvard Flat'. Apart from the very considerable difficulties of housekeeping in such surroundings, the climate is far from favourable, and, when the sun is not shining, the cold strikes into one's very marrow. However, the author managed to cope with the difficulties and enjoy it, while the glimpses she gives of her husband's work make us hope that he will soon manage to publish it in full.

Two gentle criticisms must be made. First that it would have been better if the manuscript had been edited in such a way as to omit certain trivialities, particularly in the Lima sections. This is not very serious, since they do not take up much space, but few will be interested to hear that 'there is nothing of note today', or that there was a gay celebration at the Country Club in honour of the 4th of July. The second is concerned with the spelling of certain names. It passes comprehension that one who has an ear good enough to speak Spanish, as the preface says, quite without an accent, should have persistently omitted the *i* from Sacsaihuaman and substituted *c* for *qu* in Piquillacta. Doble Murro, with a double *r*, must be a misprint, in spite of its appearing twice.

After four years of paper shortage, the production of this book seems almost lavish to us in this country. The Andean region lends itself to good photography, and the plates are worthy of it. A very pleasant map, in the form of a relief diagram, is printed on the end papers, and the margins are enlivened here and there with drawings taken mainly from aboriginal pottery, which are quite charming. G. H. S. BUSHNELL.

THE MANUFACTURE OF A FLINT ARROW-HEAD BY A QUARTZITE HAMMER-STONE. By SIR FRANCIS H. S. KNOWLES, Bart. *Pitt Rivers Museum, University of Oxford.* pp. 36, 6 plates, 3 figs. 5s.

This is the first of a promised series of Occasional Papers on Technology under the editorship of T. K. Penniman and Miss B. M. Blackwood. In any study of primitive cultures, ancient or modern, consideration of how tools and other things were made is obviously desirable, and is equal in importance to experience of their use. This detailed study of the method of flaking a flint arrowhead, with only the tools used by primitive man, viz. quartzite hammer-stones and pressure-flakers of antler is most welcome and useful, coming as it does from one who has made a prolonged study of the subject—so prolonged, in fact, that he has himself been able to acquire the high degree of skill and dexterity necessary for the purpose. No one is more familiar than the author with the techniques of the Stone Age peoples, ancient and modern, and he has long been in the confidence of the gun-flint makers of Brandon.

It is interesting to learn that a necessary preliminary to the surface flaking of the underside of a flake is the steep trimming of the edge to provide a striking platform. This might perhaps explain the occurrence of a few flakes with steeply trimmed edges in the neolithic camp at Whitehawk. As regards pressure-flakers of antler, two specimens were found in a flint-mine shaft at Harrow Hill; they belong to an uncommon and scarcely recognized class of technical tool. E. CECIL CURWEN